VOLUME

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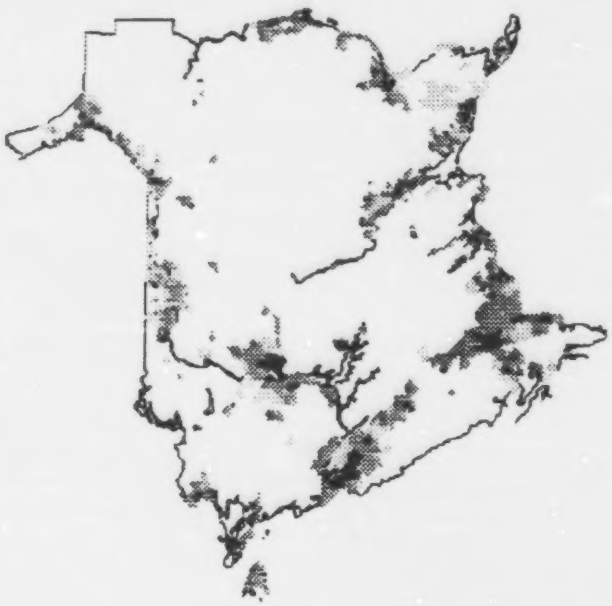
April, 1996

NEW BRUNSWICK
AT THE DAWN OF
A NEW CENTURY



OCT 24 2000

A WORKING PAPER ON

DEMOGRAPHIC ISSUES AFFECTING NEW BRUNSWICK

VOLUME I
POLICY ISSUES BY SECTOR

New Nouveau Brunswick

101-04825/

The Public Service [of Canada] must be able to anticipate the issues of importance to the country that are emerging now, issues that will affect Canadian society in the years to come. This is not easy, because we all know that the crisis of the day will distract us from what is more significant in the long term. But if we do not work hard to detect the future trends and issues in Canadian society, and if we do not take the time to do the analysis, then we are not, as public servants, supporting the government of the day as well as we could, or should. We all have more to do in any given day than we can handle, and it is though to take the time to invest in the issues that may affect society several years from now. But it is the only way to make policy development significant--to give it a role in shaping the future. **Srengthening Policy Capacity, Canadian Center for Management Development**

Understanding demography, and projecting population trends is essential if government is to accurately determine what services will be required in the future and the number of people that will need them. Clearly however, knowing how the population will be distributed in the year 2000 is an important consideration not only for public policy makers, but for many professionals as well. For instance, University Professors who seek accurate forecasts to share with colleagues at home and abroad; city planners and municipal officials who want an estimate of how many people will inhabit their cities, towns and villages in the years ahead; marketers who will need to know information about the composition of households for targeting their products; school board officials who need to project the number of students expected in the long term base; hospital directors who need to know the expected distribution of the population and the age profile of patients entering hospitals in the next decade and beyond; and of course, as mentioned above, government officials who require accurate projections on which to base the design and implementation of future programs.

Canadians prefer to find ways to invest in the future independence of fellow citizens rather than continuing systems that reinforce dependence. They want to prevent problems before they start; they want social programs to provide a springboard to self-sufficiency in every sense -- health, employment, education. **Canadian Policy Research Networks**

The policy issues identified in this volume were prepared by various provincial government departments in support of the work of the Select Committee of the Legislature on Demographics. These issues required thorough investigation and analysis. It required departments to conceptualize the relationship between probable population trends and projections (as outlined by the New Brunswick Statistics Agency), and the key issues affecting respective departments. Through a comprehensive understanding of future population projections, departments were able to identify potential problem areas, in turn, identifying and outlining them in the following document.

It is interesting to note that the Working Group of Officials who reviewed issues in their respective areas found that there was a marked difference in the level of activity on demographic analysis undertaken by departments across government. Some departments, by their very nature, were already involved in consideration of these issues and trends, while others had not

considered them to the same degree. Therefore, considering the important nature of demographic analysis, there was a unanimous agreement that there should be a regular review of these demographic matters affecting changing conditions. There is a great need for consistent population projections for policy planning purposes.

It is the expectation of the Legislature's Select Committee on Demographics that the following document will enable government and the public to manage and cope more effectively in the future, and proactively respond to demographic forces.

The following public policy issues were examined by the Working Group of Officials in support of the demographics project.

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HEALTH AND SOCIAL SERVICES

As the population structure changes, with an increasing number of seniors and a decreasing number of children, the range of factors which determine and influence the health and well-being of the various segments of the population requires reflection. The type of services intended to promote health, prevent disease and manage illness need to consider the evolving population structure and the factors associated with various segments of the population.

Health is more than the absence of disease. It is defined as the capacity of the individual, group and the environment to interact with one another in ways that promote subjective well-being and allow people to cope with, adapt to, or influence the pressures of daily living. It includes the optimal development and use of abilities, at whatever level, be they physical , social or mental. Health is more than physical health. Being healthy is associated with the resources available to cope with life's challenges throughout the life cycle.[5]

Of great significance to the life time health of any individual is their prenatal and early childhood experiences. Healthy child development depends upon a caring and nurturing environment in which emotional, cognitive and physical needs are met. Dr. Fraser Mustard, President, Canadian Institute for Advanced Research has stated many times that the Canadian economy and overall health of Canadians is directly tied to the amount and quality of nurturing given to children.

Achieving and maintaining health or well-being over a lifetime is complex. A wide and varied range of demographic factors determine and influence our health. Income, type of family, education and employment/labour force participation have a strong impact on our physical and mental health and our overall sense of well-being. Studies show that income and social status are primary determinants of health. Health status improves at each step up of the income and social ladder.

In a 1994 study, 77% of men and 74% of women in the highest household income group reported excellent or very good health, compared with 52% of men and 51% of women in the lowest income group.[6] Families, friends and a supportive community are associated with improved health status. Education is another important factor positively associated with better health status.

The Manitoba Centre for Health Policy and Evaluation has developed a socio-economic risk index. This index includes measures of high unemployment, high numbers of single parent households, low levels of education, low female participation in the

The pattern of health care costs at different stages in the average life cycle has been established in a number of studies, and implies that as the number of elderly increase, total health care costs are also likely to rise, although the effects of increased life expectancy on per capita health care costs is more difficult to establish because it will depend, in part, on the actual state of health of the aged.
Jean-Claude Paye, Secretary General, Organizations for Economic Co-operation and Development

[5] Fed/Prov/Terr. Advisory Committee on Population Health. Strategies for Population Health: Investing in the Health of Canadians. 1994

[6] Statistics Canada. National Population Health Survey Overview 1994-95. Cat. 82-567 p.2

work force and low housing value. In Manitoba, a correlation was found between a region's score and the death rate among its residents - the higher the score, the higher the death rate.[7] In New Brunswick it can be assumed that these socio-economic and demographic factors - income, family situation, education and labour force participation - are also closely associated with the health and well-being of individuals.

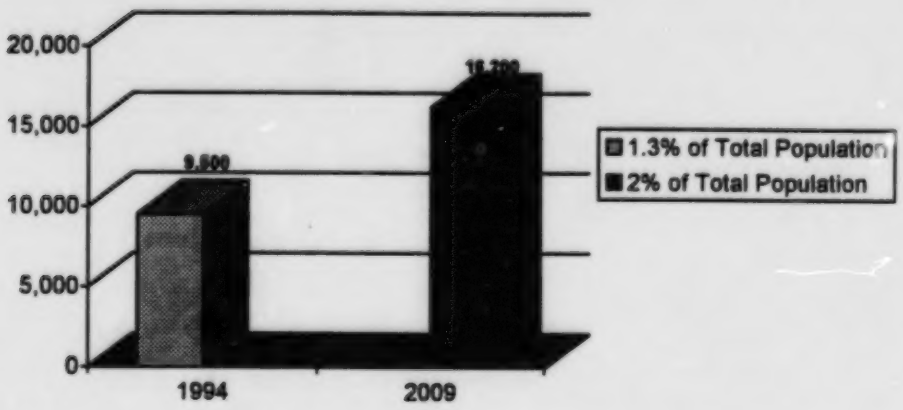
Physical factors in the natural environment such as air, water and soil are key influences on health. Our biological and genetic make-up determine some aspects of our health. Personal health practices, capacity to cope with situations and health related behaviours, such as exercise, smoking, drug and alcohol use, influence our well-being.

A system of public and private services assist individuals and families in striving for and achieving optimum health. Services designed to maintain and promote health and well-being and to prevent and manage disease contribute to population health.

[7] Manitoba Centre for Health Policy and Evaluation Information System: Manitoba 1990-March 1993, p.2

ISSUE 1: UTILIZATION OF HEALTH AND SUPPORT SERVICES BY SENIORS 85+

Figure 1
Population Age 85 Years and Over
1994 Actual Versus 2009 Projected



Source: N.B. Statistics Agency
Projection Series, July, 1995

Description

Demographic changes in the 85 years and over age group will impact on the demand for and utilization of formal[8] health and support services for seniors, such as hospitals, nursing homes, extra mural hospital, homemaker services, and meals on wheels. Over the period 1994 to 2009 the general population is forecast to grow by roughly 5%, while the 85+ population is expected to increase by 71%. As shown in figure 1, this will result in the 85+ age group representing 2% (16,200) of the total population in 2009, compared to 1.3% (9,500) in 1994.

Analysis

There were 9,500 residents of New Brunswick in 1994 who were 85 years of age or older. By 2009, this figure is expected to increase by 71% to 16,200. Of these, 70% are women. Since the senior population, specifically those 85 years and over, tend to be more dependent on formal health and support services, they will require increasingly more consideration.

An increase in the demand for support services such as homemaker services, personal care, meal preparation and transportation services can be expected. In 1995, 37% of individuals aged 85+ received community services. In contrast, seniors aged 65-84 years, who represent the highest number of clients, proportionately received fewer services at 9% (Department of Health and Community Services, Family and Community Social Services Division, Office for Seniors).

[8] Formal health and support services are defined as those services whose costs are publicly or privately financed, as opposed to informal services that include natural support networks, such as family, friends and neighbours.

The increase in the total senior 65+ population suggests an increased need for support-based living accommodations. For example, many seniors living independently may prefer to live in an arrangement where supports are available if or when needed. A higher demand for home renovation services and supplies (i.e. wheel chair ramps, special bath safety equipment, etc.) to modify existing homes to accommodate special needs of seniors may be expected.

One might expect elderly women to be disadvantaged compared to elderly males. This disadvantage can be a result of lower labour force participation[9] and lower average earnings[10] among those who do participate in the work force. An accumulation of these factors consequently mean lower financial incomes for women living alone during their elder years. The national poverty rate for unattached women age 65 and over was 45.2%, compared to 29% for unattached males age 65 and over (Department of Health and Community Services, Family and Community Social Services Division, Office for Seniors, *News and Views*: No.3, May 5, 1995). Both the divorce rate and the higher life expectancy for females (81.4 years for females compared to 74.9 years for males) will likely mean that there will be a higher number of senior women living alone compared to males. The problem becomes more pronounced because New Brunswick has a high rural population (52%) where access to some services may be difficult. These are additional reasons why the demand for formal support services and living accommodations designed to accommodate seniors could increase.

Research has shown that seniors 85+ tend to use more health care resources than other segments of the population. It is generally recognized that seniors 85+ have a higher prevalence of some diseases (i.e. osteoporosis, dementing disorders such as alzheimer's, heart disease, strokes, etc.). They also have an increased prevalence of limitations in hearing, vision, mobility and other capacities which affect function. Based on Medicare fee-for-service billings in fiscal 1994/1995, individuals 85+ receive 22.6 physician services per capita[11] compared with 16.2 for those 65+[12] and 7.4 for the total population. The per capita cost to Medicare for these physician services for individuals 85+ ($477) was significantly higher than the corresponding per capita cost for the total population ($211), but only marginally higher than the per capita cost for the 65+ population ($463)[13]. For the 1993/94 fiscal year, seniors 85+ spent roughly 14.8 days in the hospital compared to the population average of 1.61 days. With the province wide implementation of Single Entry Program (SEP), it is anticipated that the number of hospital days within the senior (85+) age group will decline.[14] Furthermore, in 1993/1994, approximately 21% of individuals 85+ years were residents of nursing homes, representing 47% of the nursing home population (Department of Health and Community Services, Institutional Services Division, Program Support Services Unit).

Implications

The most significant implication of an increasing 85+ population will be a need for more services either private or public. Assuming current senior utilization patterns continue, the 85+ population will require a higher proportion of resources for services.

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[9] From Statistics Canada's Labour Force Survey, the 1994 annual average labour force participation rate for females was 51.5% compared to 67% for males in N.B.

[10] According to Statistics Canada, in 1993 women in N.B. earned only 52.3% of what males' earned.

[11] All Medicare utilization and cost figures reported here are for physician services billed to Medicare on a fee-for-service basis. These services accounted for 77% of total Medicare payments to physicians. The remaining services and costs, including payments for physician services in nursing homes paid through sessional arrangements ($832,000), payments to salaried geriatric physicians ($800,000), radiologists, etc are not reported by age group, although some estimates could be calculated.

[12] (If the figure for the population 65-84 years is requested, it is 15.4 services.)

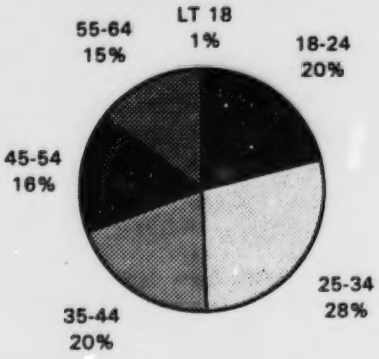
[13] (If the figure for the population 65-84 years is requested, it is $461.)

*If nursing home sessional payments were included, the 65+c.f.85+ picture might change . For example, given the high percentage of those 85+ in nursing homes, the $832,000 nursing home sessional expenditures could be prorated against the age distribution of nursing home residents. Data is not likely adequate to extend this type of analysis to other non-FFS payments.

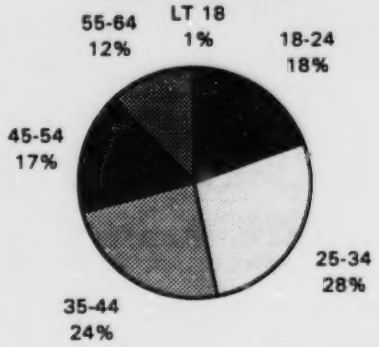
[14] Using Region 3 data, where the Single Entry Point program was first implemented, on average, seniors 85 years and over spent roughly 11.3 days in the hospital.

ISSUE 2: THE DEMOGRAPHIC PROFILE OF THE SOCIAL ASSISTANCE CASELOAD

DISTRIBUTION OF SOCIAL ASSISTANCE CASELOAD, 1986



DISTRIBUTION OF SOCIAL ASSISTANCE CASELOAD, 1995 (PRELIMINARY)



Description

Social assistance may be accessed by New Brunswickers in need provided they are 16 years of age or older. Benefits are provided to only a few persons aged 65 years or older since this is the age at which most clients become eligible for programs for seniors. For the purposes of this analysis, the eligible age for benefits has been restricted to the 16 to 64 year old range.

Age distributions for the New Brunswick population were calculated using actual census data and population projections provided by the New Brunswick Statistics Agency. Data on educational levels and unit type by age group were gathered from departmental information systems. The accuracy of the data is limited by the self-reporting aspect of the data. Experience has shown that educational levels may be reported to be higher than they actually are, or that the passage of time since school participation has resulted in a lowering of educational levels.

Analysis

Demographic change, particularly the aging of the baby boomers, has influenced the composition of the social assistance caseload to some degree. However, the size and age structure of the social assistance caseload are not driven by any one factor, but rather change in response to a combination of factors, including population demographics, levels of educational achievement, household composition and the availability of employment. Analysis of the caseload suggests that there are common characteristics amongst clients within age groups that could influence social assistance policy and programming.

The young clients: 16-34 year olds

Nearly 1/2 of the social assistance caseload are between 16 and 34 years of age. These young adults are over-represented in the caseload and this tendency has become more pronounced since 1986, that is, a young adult is more likely to be receiving income support today than he/she was in 1986.

There has also been a change in the type of client. Since 1986 the percentage of single **16/17** year olds has decreased while the percentage of single parents has increased dramatically. As of September 1995, there were 95 **16-17** year old single parents, all of whom were women.

The type of **18-24** year old cases have changed since 1986 as well, when more than half of these clients were single persons. There were 2,460 **18-24** year old single parents. In 1995, single persons are less than half of the 18-24 year old caseload. This has been offset by a significant increase in the percentage of 2-parent units. Targeting of special initiatives, such as NB Works and the Self-Sufficiency project, and improved enforcement of family support orders has been responsible for reducing the percentage of **25-34** year olds in receipt of assistance who are single-parents.

Consistent with the entire social assistance caseload, this age group is also better educated in 1995 than in 1989. Approximately 60% of 16/17 year old clients are currently enrolled in school, the majority of who are attending high school. The remainder of this age group, 18-34 year olds, are the most well educated of all clients with a full third having a high school education or better.. Nevertheless nearly 2/3 of these clients groups have less than a high school education.

The bulk of the baby boomers: 35-54 year olds

As the individuals born during the peak years of the baby boom have aged, the **35-54** age group has increased in both its share of the New Brunswick population and the social assistance caseload since 1986. This age group is actually under-represented in the caseload and is less likely to be on assistance in 1995 than they were in 1986.

As with every age group over 35, the percentage of single and 2 person+ units has increased since 1986, while the percentage of families has declined. While there has been an improvement in the educational achievement of this caseload, 80% have less than a high school education. Unlike those less than 35 years of age, few 35-44 year olds are engaged in training/academic upgrading.

The 30's generation: 55-64 year olds

The clients included in the **55-64** year old age group were born during the 1930's, a time when fewer babies were born due to the Great Depression and the beginning of the Second World War. In 1986 this age group was over-represented in the caseload. In 1995 it is not, reflecting the implementation of the Job Corps program and new requirements for eligible clients to access Canada Pension Plan Benefits at age 60. Not surprisingly, given their ages, few of these clients head family units, and in fact this percentage has declined since 1989. Single -person units dominate with nearly 70% of 55-64 year olds living alone. It is also not surprising that the older clients are the least well educated and have seen the least improvement in educational levels, with 93% of this group having less than a high school education.

Implications

The rising incidence of young clients should be of concern as these are New Brunswick's future consumers and taxpayers. This is the age group that traditionally stimulates consumer markets as they enter the labour market and form new households, purchasing their first homes and automobiles, buying large ticket household items such as washers and dryers, and having their children. These young workers will also become increasingly important taxpayers, as the baby boomers age and require higher levels of health and other social services.

It is encouraging to witness a rising level of educational achievement in all age groups. However, the fact remains that a lack of basic education remains a barrier for the majority of social assistance clients of all ages. The escalating percentage of clients with high school education seems to support the findings of a recent study conducted by Statistics Canada that indicated that since 1979, 25-29 year olds with only a high school diploma have had

increasing difficulty in finding steady employment and even more difficulty in obtaining well-paid work. Even more disturbing is the rise in the percentage of clients with post-secondary education. Many young people who have acquired a post-secondary education may find themselves on the caseload due to an inability to access jobs because of lack of employment experience or because their education does not fill a labour market need. Older clients who have post-secondary education may also find that their education and work experience are no longer in demand in the labour market.

The reduction of the percentage of families in the caseload is heartening. Except for 16/17 year olds, both the numbers of single parent cases and the percentage of the caseload in each of the age groups that represents single parents have declined over the first half of this decade. Targeting of initiatives at single parent families has obviously been effective, since the divorce rate in New Brunswick has doubled since 1986 and both the numbers and percentages of single parent families are growing. The dramatic increase in the percentage of very young single parent families on the caseload reflects increasing rates of teen pregnancy. It is important to realize, however, that 60% of single parents on the caseload are under 35 years of age.

Two parent families in the caseload have also grown smaller in number and percentage. The number of two parent households in New Brunswick has declined since 1986 as well. Unfortunately, the decline in percentage of two parent families in the social assistance caseload has been experienced only by the 35+ age groups. The percentage of *young* two parent families in the caseload is increasing. Approximately half of two parent families in the 1995 caseload are under the age of 35, compared to 37% in 1989. As mentioned above, this will have significant implications for housing and consumer markets should this trend continue into the next century.

Households without children are on the increase as a percentage of the caseload. Single person units are on the increase as a percentage of all age groups, excepting those under age 25 while 2 person+ units (couples without children or unrelated individuals sharing accommodations) are on the increase in all age groups.

EDUCATION

The responsibility of education in our society is to socialize our citizens, to ensure they become what we feel is necessary--economically, culturally and socially--to ensure our collective prosperity. Today in New Brunswick, for example, we may value people who are useful, adaptable, innovative and socially adjusted, and we are trusting our educational sector to instill these qualities in New Brunswickers. Furthermore, as our world changes, as it is doing so rapidly, the characteristics and skills needed to ensure our future prosperity may also change, and we expect our educational system to respond in time. But what happens when the makeup of our society changes? We are currently witnessing an aging of our population, unprecedented in Canadian history. What will this, and associated demographic changes mean for the educational sector? How could the educational sector best respond to ensure that New Brunswickers have the skills and personal characteristics needed to ensure the future prosperity of our entire people?

Education plays a critical role in the development of society. It is the instrument which sustains our growth in a complex and demanding world economy. An early educational investment in our children is a strong and better investment in our future.

Speech from the Throne, The Honourable Gilbert Finn, O.C. Lieutenant-Governor, March 19, 1991

Education both affects and is affected by the characteristics of society. The educational attainment of our population plays a role in defining our society's social and economic appearance. For example, in recent years, the proportion of university or college trained graduates entering the work force has increased, resulting in a more educated labour force. The implications of a more educated labour force, as noted by futurist Ruben Nelson, pertain to the level of consciousness possessed by those with higher levels of education; they have different expectations, and process information differently. Thus, today's labour force must be managed differently than in the past.

Other demographic characteristics impact upon the educational needs of our society, and on how that education is delivered. For example, the focus of much discussion in this paper is the changing age structure of the province. At the elementary/secondary level of education, where participation in the education system is compulsory for those between the ages of 7 and 16 years, the level of enrollment is almost purely a function of the numbers of school-aged children residing in the province. Therefore, given that the youth sector is expected to shrink over the next decade, elementary/secondary enrollments will decline accordingly. This will reduce, in terms of absolute numbers, the demands on that sector of education.

At the post-secondary level, enrollments are more subject to supply and demand variables. While policy could largely dictate the supply side of the formula, demographics affect demand. Demographics have placed strong pressure on the post-secondary sector in recent years as the Baby Boom generation moved through the colleges and universities. However, other non-demographic factors, notably labour market issues, are also increasing demand

for post-secondary education. To the extent that policy and resources can accommodate the increased demand, post-secondary enrollments have increased.

Education is no longer just for the young, but become a life long affair. The concept of lifelong learning has received considerable attention in the 90's, reflecting this notion that learning spans a lifetime, well beyond the reaches of the traditional school system. As we extend our definition of education to encompass the concept of lifelong learning, we come to realize that even as our population ages, we should not expect the demand for educational services to decline. What will change will be how it is delivered: where, when, to whom and by what means. A consideration of the demographics of future student populations will help public policy makers respond effectively to public demand.

When looking to fill this demand, flexibility becomes a key issue: flexibility of delivery, of scheduling, of content, and of amount of education delivered. The ability to respond flexibly will depend upon the capacity of the educational system to establish appropriate infrastructures. For example, accreditation is a growing issue. People want to be able to take the training they want, when they want it, and they want to have it recognized, or receive accreditation towards certificates, diplomas or degrees. This will require much collaboration, to develop inter-institutional recognition of course equivalencies. This process has already begun and will mushroom as the Internet, the Cable television and other distance and technological innovations allow individuals access to education, from a variety of institutions. This will further require, collaboration between institutions, and between the elementary/secondary and post-secondary levels of education on developing means to track individuals, in order to maintain accurate records of their accreditation history.

Collaboration between educational institutions is growing, and will grow even more in the future. In recent years, for example, the traditional, linear path through the education system has been obscured, complicating the process by which education is attained. Deviation from this traditional path is certainly a reflection of our society's eclectic nature, and the growing pressure to deliver services that most appropriately meet the needs of the individual. As the lines between the educational sectors blur, the need for information sharing and collaborative planning and programming becomes increasingly clear.

Over the past three decades, an increasing number of Canadians, particularly women, have enrolled part-time in post-secondary programs. On average, these students are older than past generations of students, an indication that they may be people returning to school after an absence. A rising proportion of adult Canadians also have been enrolling in courses to complete their primary and secondary education or upgrade job-related skills.

Cynthia Haggar-Guenette, Canadian Social Trends

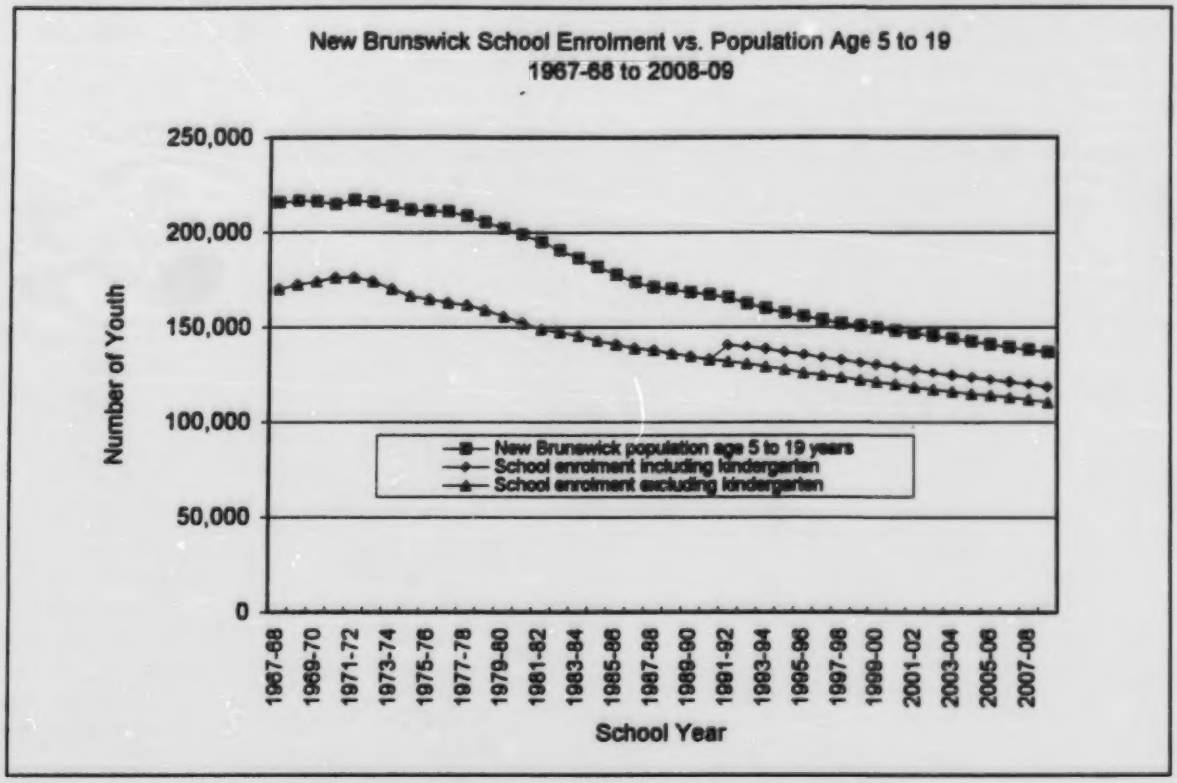
The Commission on Excellence in Education, in its 1993 report To Live and Learn[1], recommended that fixed links within the education system be established in order to "contribute to the fostering of a learning culture and the promotion of educational excellence..." and to "have a profoundly beneficial effect upon the quality, character, and sense of purpose of education in New Brunswick." Thus, the extent to which we can assess, understand and respond cohesively to our changing society will determine the quality of our educational investment in New Brunswick's future.

In this new high-knowledge economy, it is more important than ever to stay in school and get the education and training that will give them a head start. But it doesn't matter what you study, I told them; you can choose marketing, marine biology, English, sociology, engineering ... as long as you apply what you've learned in an industry that has a real future in the New Economy.

Nuala Beck, "Excelerate, Growing in the New Economy", 1995

[1] The Commission on Excellence in Education, *To Live and Learn: The Challenge of Education and Training*, January 1993, p. 12-13

ISSUE 3: DECLINING ENROLMENT - PROVINCIAL



Source: Enrolment data are from the N.B. Department of Education, June 1995. Historical and projected population data are from N.B. Statistics Agency, March, 1994.

Description

Enrolment is based on the number of students enrolled in New Brunswick's public elementary/secondary school system as of September 30 of each school year. For 1971 to 2008, population is presented as on July 1. Prior to 1971, population is presented as on June 1. The graph illustrates the close correlation between the province's population age 5 to 19 years and public school enrolment.

Analysis

Although New Brunswick's total population is projected to increase slowly through 2000 and beyond, the population of the youth sector will continue to shrink. The proportion of New Brunswick's population ages 5 to 19 has dropped from 34% in 1971 to 22% in 1992, and may continue dropping to as low as 19% by 2001. Low birth rates and out-migration of many young families are to blame for the shrinkage of the youth sector.

Because elementary/secondary education is compulsory for all children between the ages of 7 and 16 years, school enrolment is almost entirely a function of the size of the population of

this age group. As such, school enrolment trends parallel the population trends for the youth sector.

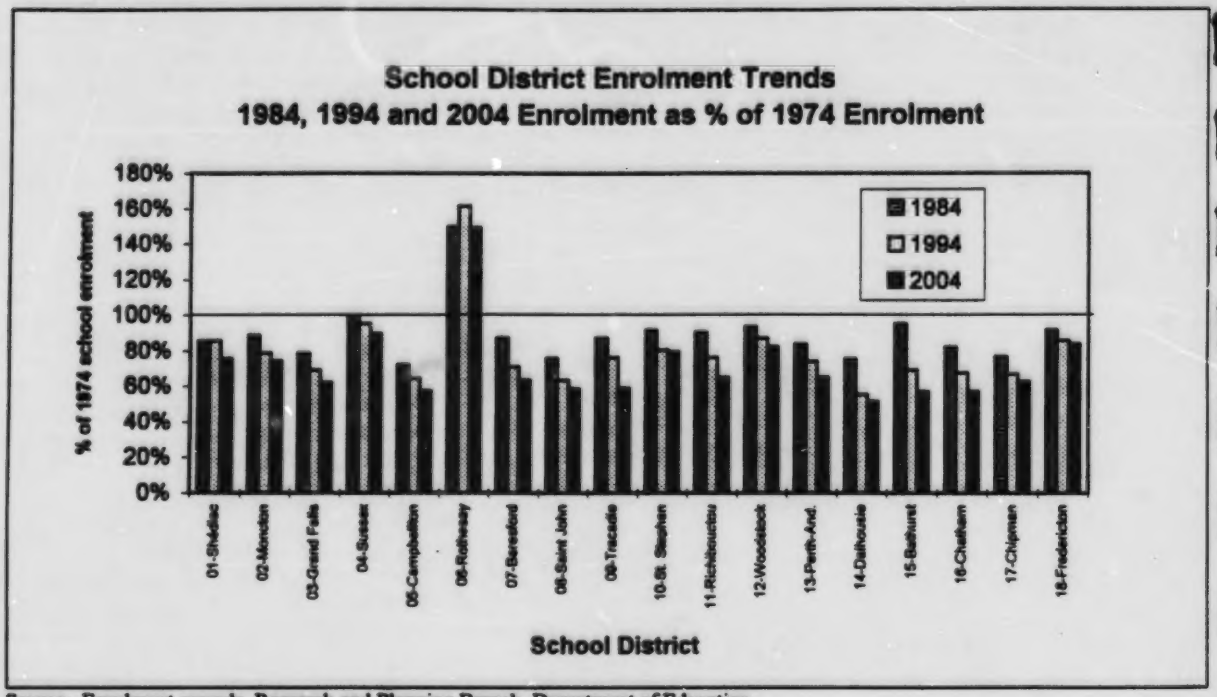
Declining school enrolment has been a fact in New Brunswick since peaking at 175,997 students in 1971-72. The 10 year period following this peak showed the heaviest enrolment declines, dropping by a total of 27,140 students, an average of 1.7% per year. Between 1971 and 1993, enrolment dropped by 37, 311 students (1.4% per year). Although enrolment is projected to drop continually throughout the projection period, declines will be more moderate, averaging about 1.0% per year between 1994 and 2008.

Implications

The most likely implication of declining enrolment will, over time, be a decrease in the resource requirements for the delivery of elementary/secondary education relative to other government services. In a setting of continuous enrolment decline, the demand for resources (staff, transportation, facility space, materials, etc.) will also tend to decline, assuming all else stays the same. For example, if class sizes and pupil-teacher ratios remain constant, we might assume that for every 30 students lost, one less teacher would be required in the system.

It is very important to note, however, that with a rate of decline of 1% spread across the province, student enrolment per school would decline at an annual avérage of only about 5 students per school. Because the infrastructure of the system is designed for high volume, reductions in enrolment will not yield a corresponding rate of cost reduction due primarily to diminishing economies of scale.

ISSUE 4: REGIONAL VARIATIONS IN ENROLMENT TRENDS



Source: Enrolment records, Research and Planning Branch, Department of Education.

Description

Enrolment is based on the number of students enrolled in Grades 1 through 12 in each of New Brunswick's public elementary/secondary school districts, as of September 30 of each school year. In order to show growth rates independent of district size, the 1984,1994 and projected 2004 school enrolments are shown as a percentage of the enrolment recorded in 1974. (In order to analyze natural growth rates, kindergarten enrolments, first introduced in 1991, were excluded.)

Analysis

Province-wide, New Brunswick's Grade 1 to 12 enrolment declined by almost 38,000 students (24%) over the past two decades. Although all but one school district have shown enrolment declines, some districts have experienced more significant change than others. For example, as of 1994, District 14 (Campbellton/Dalhousie-English) declined to 55% of its 1974 enrolment. On the other hand, some districts have maintained over 80% of this enrolment. District 06 (Rothesay/Hampton-English) is the only area of steady growth, with 160% of its 1974 enrolment.

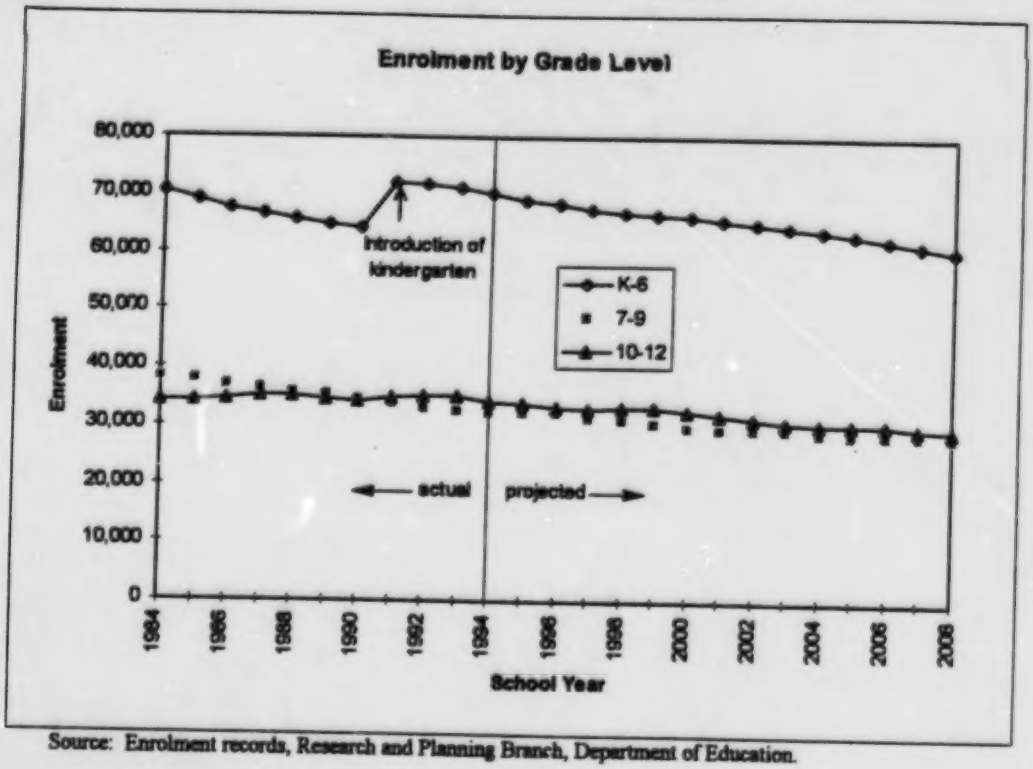
It is expected that these district-to-district variations in enrolment are a reflection of migration patterns influenced largely by economic and social factors. For example, declines in enrolment have been the most marked in the northeast region of the province, which has been the most dramatically affected by negative growth in the fishing, mining and forestry sectors. On the other hand, growth in the Rothesay/Hampton area is thought to be a result of suburban sprawl.

Based on the status quo, enrolment is expected to drop steadily from the 1994 enrolment level in all school districts.

Implications

The main implications of varying rates of enrolment change pertain to resource allocation and capital planning. Because of regional variations in enrolment trends, the provincial trends cannot be used to guide planning in the same way in all regions of the province. Planning considerations will vary between those districts experiencing more significant enrolment decline and those where the situation is more stable.

ISSUE 5: ENROLMENT PATTERNS BY GRADE LEVEL



Source: Enrolment records, Research and Planning Branch, Department of Education.

Description

Enrolment is based on the number of students enrolled in New Brunswick's public elementary/secondary school system, as of September 30 of each school year. For purposes of this analysis, the grade levels have been broken into three categories: Kindergarten through Grade 6, Grade 7 through Grade 9, and Grade 10 through Grade 12. It should be noted, however, that these categories, which historically represented elementary, junior high and senior high structures, are in a period of transition. The francophone school structure now recognizes two grade structures; kindergarten through Grade 8, and Grade 9 through Grade 12. The anglophone system is in the process of phasing in a structure which will group kindertgarten through Grade 5, Grade 6 through Grade 8 (middle school), and Grade 9 through Grade 12.

Analysis

Between 1984 and 1994, kindergarten through Grade 6 enrolment increased slightly, entirely as a result of the introduction of 10,000 kindergarten students in 1991. Had kindergarten not been introduced, the natural pace of enrolment decline would have been similar at the elementary and junior high levels, at approximately 1.6%-1.7% per year. Senior high levels, on the other hand, have been more stable. The net change between 1984 and 1994 has been negligible, as small increases were shown in the early 1990's. This stability has been attributed to the combined effects of rigourous post-secondary entry requirements, a shortage of youth employment opportunities, the flexibility allowed by semestering and the wide

variety of retention programs and services aimed at keeping youths in school until graduation.

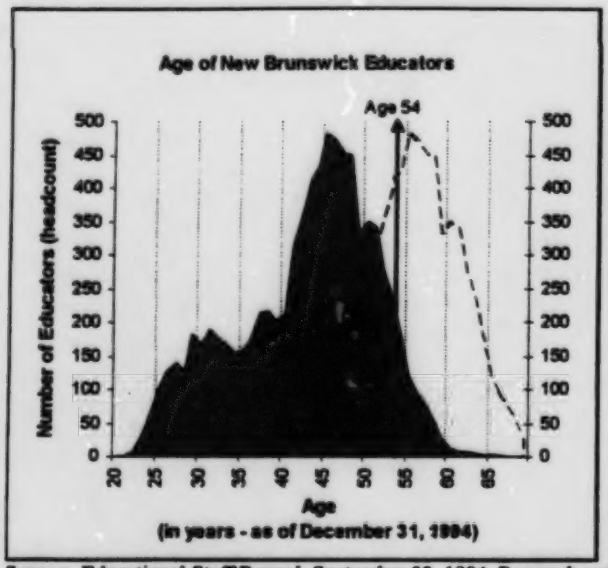
Based on projected figures, the rate of enrolment decline is expected to be similar at all grade levels, at about 1.0% per year between 1994 and 2008.

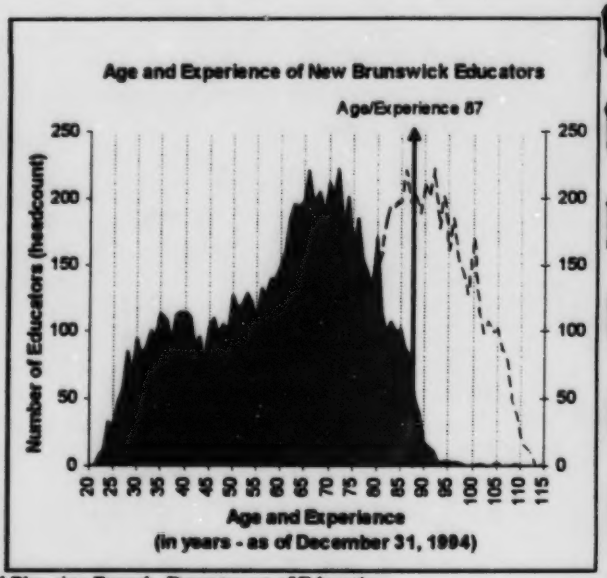
Implications

The average student entering kindergarten today will spend a total of 13 years in the elementary/ secondary school system. As such, demographic changes affecting this year's kindergarten class will work their way through the system over a period of 13 years. Simply put, a large kindergarten class this year, will mean a large grade 7 class in 2002 and a large grade 12 class in 2007. Other forces are also at play on these students as they travel through the school system. Changes in the social and economic environment, and in educational policy and practice work together to alter enrolment patterns. For example, the introduction of semestered high schools combined with a depressed job market seem to have made it more attractive to complete a three year high school program over a four year period. This has served to swell high school enrolments and drive up the cost to graduate an individual student.

Following enrolment trends by grade level is necessary in order to determine where and what kinds of resources are and will be required in the future. Each grade level (primary, elementary, middle and high school) has differential staffing, facility, and resource material requirements, and in order to plan effectively, the varying demand for these resources should be taken into consideration.

ISSUE 6: AGING TEACHING FORCE




Age and Experience of New Brunswick Educators
Age/Experience 87
Number of Educators (headcount)
Age and Experience
(in years - as of December 31, 1994)

Source: Educational Staff Record, September 30, 1994, Research and Planning Branch, Department of Education.

Description

Data on age and age/experience, as shown above, are reported for the 8,281 educational staff members active in New Brunswick schools and school district offices as on September 30, 1994. Educational staff is defined to include teachers, principals, vice-principals, department heads, resource teachers, guidance counsellors, teacher librarians, coordinators, consultants, supervisors, superintendents and assistant superintendents. Age is calculated as of December 31, 1994. Age and experience, a measure which indicates retirement eligibility, is calculated by adding an educator's age and years of teaching experience. At present, members of the New Brunswick Teachers Federation are eligible for full retirement when their age and experience index reaches 87. The data shown above do not include educators on leave. The broken lines on the graphs represent the shift in age and age/service that will exist in 10 years, based on the current teaching force.

Analysis

As school enrolment grew rapidly in the late 1960's and early 70's, a large pool of school teachers were hired to accommodate the growth. This pool of teachers has formed the basis of the teaching population for thirty years, leaving relatively few openings for new teachers to join the ranks. The school system is now faced with a situation whereby the teaching force is aging, and teachers are approaching retirement in increasingly larger numbers.

In 1994, the average age of New Brunswick's educators was 42.7 years, and half were over the age of 44. In a career which typically spans between the ages of 22 and 54 years, a median age of 44 is an indication that the age distribution of the teaching force is indeed skewed. This is illustrated in the graphs above.

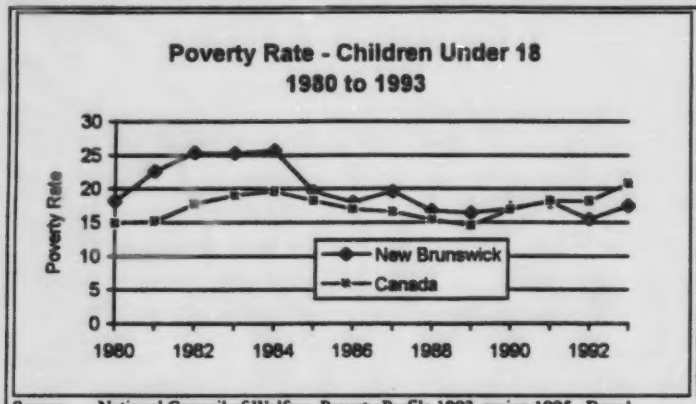
Using the current teaching force as the basis of analysis, almost 3,400 educators (41% of the current force) will become eligible to retire over the next 10 year period. Experience has

shown that most will retire upon reaching eligibility. Because administrators tend to be older (average age of 46 years) and more experienced, there will be an even faster rate of retirement among principals, vice-principals, supervisors and coordinators.

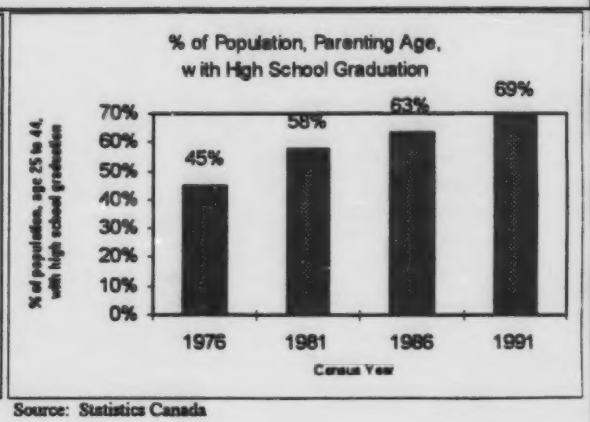
Implications

There are two general implications of an aging teaching force. First, it will be important to address the supply and demand issues involved in staffing New Brunswick's schools. In a period of declining enrolment, it is conceivable that the demand for teachers will also decline. The degree of impact of the aging teaching force on the education system will depend on the balance between the increasing demand for teachers due to attrition and decreasing demand due to declining enrolment and system efficiencies. For many years, the system has experienced an over-supply of teachers, and has not had to concern itself with supply-side issues. The challenge will be to ensure that strategies are in place to synchronize demand and supply, overall and by specialty area and region.

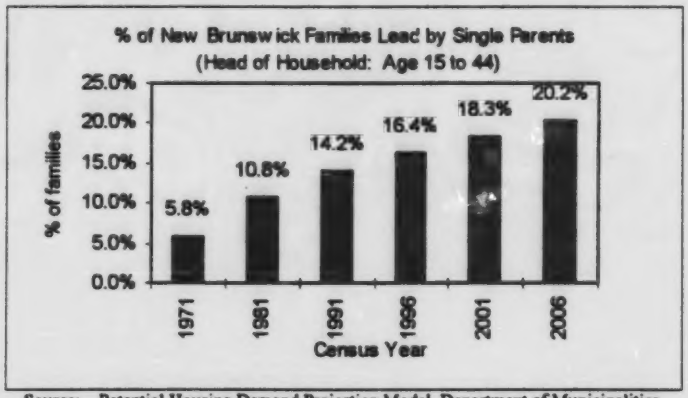
ISSUE 7: READINESS TO LEARN



Source: National Council of Welfare, Poverty Profile 1993, spring 1995. Based on Statistics Canada data.



Source: Statistics Canada



Source: Potential Housing Demand Projection Model, Department of Municipalities, Culture and Housing, August 1995

Description

Poverty rate, which is calculated by the National Council of Welfare based on Statistics Canada data, measures the percentage of the population living in families with incomes below the low income cut-off. Low income cut-offs vary by area of residence and family size. For example, for the purposes of this report, the low income cut-off for a family of four living in a community of between 30,000 and 99,999 people is $26,302. The data presented in the graph above represents the poverty rate for the youth population under 18 years of age, for New Brunswick and Canada. Projected data for poverty rates are not available.

Information relating to educational attainment is based on Statistics Canada census data measuring the highest levels of education attained by Canadians. The sub-set of data analysed in relation to student readiness-to-learn is the percentage of the population, who are of parenting age (25 to 44 years), which has achieved at least high school graduation. These data are produced every five years in association with the census. Projected data are not available.

Estimates of family composition are based on a sub-set of data from the Potential Housing Demand Projection Model, produced by the New Brunswick Department of Municipalities, Housing and Recreation in August 1995. The projected data are based solely on trends extrapolated from historical data. The graph presents the proportion of all New Brunswick families, with the head of household in the 15 to 44 age group, led by a single parent.

Analysis

After declining in the mid-1980's, the rate of povery among New Brunswick youth has remained fairly stable. Because no trends exist to suggest a change in the youth poverty rate, there is reason to believe that the numbers of poor youth will not change significantly in the near future. Of note, however, is that the rate of poverty among Canadian youth has been increasing steadily since 1989, and was higher in 1993 than in the previous peak year of 1984. The extent to which the Canadian trend indicates the future for New Brunswick youth will require continued monitoring.

Over the past 20 years, the number of lone parent families in the 15 to 44 year age group has grown considerably. In 1971, there were approximately 3,750 young, lone parent families in New Brunswick, representing, 6% of all families in this age group. By 1991, this number had increased to over 15,000 lone parent families, representing 14% of young families. The projections produced by the Housing Demand Model, which are based on extrapolated historical data, suggest that lone parent families may continue to increase both in number and as a proportion of young families.

Although data for educational attainment can not be projected, the historical trend towards increasing levels of educational attainment are clear. The percentage of the population which graduates from high school has been increasing steadily over time, and between 1976 and 1991, increased from 45% to 69% in the 25 to 44 year age group. Because of the education system's continued efforts to retain students until graduation, it is reasonable to assume that this trend of improvement will continue into the future.

In combination, the three indicators presented here suggest that the incidence of poverty and single parent families will, at best, remain stable over the short term. However, there is reason to believe that the numbers of parents having graduated high school is on the rise.

Implications

Although generalizations about a student's ability to learn cannot be based solely on demographic characteristics, there are a number of social and economic risk factors that can affect an individual's potential to succeed in school. In particular, factors relating to family income, parental attitudes and experiences regarding education, family composition and health can affect learning.

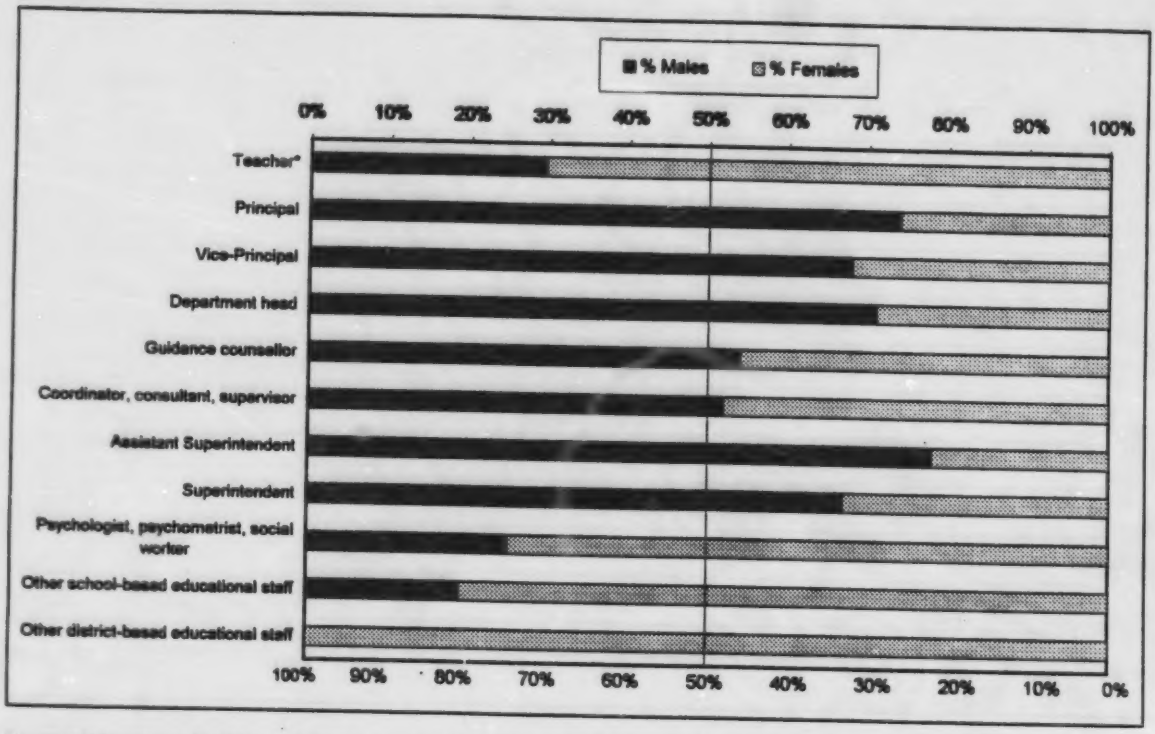
Three indicators of readiness-to-learn are discussed here. Indications are that significant improvements in the level of youth poverty are not iminent, and that single parent families are on the rise. These factors would tend to put downward pressure on students' learning ability. On the other hand, increasing levels of educational attainment among parents should have the effect of supporting student learning. Because the relative and combined effects of these factors on students' readiness-to-learn are unknown, it is difficult to determine with any certainty the overall impact they will have.

The extent to which our society is coping with such factors is reflected in the student population's ability to learn, and the extent to which interventions are needed in order to emotionally and physically enable students to learn. If social and economic hardships

increase, there will be an increasing demand for resources and programming to enable learning. Areas affected would include:

- Programming for students at risk of dropping out of school
- Nutrition programs to address student hunger
- Programming and policies relating to discipline and student behaviour
- Counseling for personal and family problems

ISSUE 8: GENDER DISTRIBUTION OF EDUCATIONAL STAFF



Source: Educational Staff Record, September 30, 1993, Research and Planning Branch, Department of Education.

Description

Data on age and age/experience, as shown above, are reported for the 8,497 educational staff members active in New Brunswick schools and school district offices as on September 30, 1993. Educational staff is defined to include teachers, principals, vice-principals, department heads, resource teachers, guidance counsellors, teacher librarians, coordinators, consultants, supervisors, superintendents and assistant superintendents. The horizontal bars on the graph represent the male to female ratio in each employment category. The dark bars represent the percentage of males while the lighter coloured bars represent the proportion of females. For example, the graph can be interpreted to say that approximately 30% of teachers are male and 70% are female.

Analysis

In 1993, 64% of all educators were female. Female dominance of the teaching profession has diminished over the past century dropping from a high of around 90% in the 1920's to the 60% mark in the late 1980's. Recent statistics have shown a slight trend reversal; 60% of the 1986 educators were female, rising to 61% by 1988 and then to 64% by 1991.

As illustrated above, most of the administrative positions in the education system are held by men. In 1993, 74% of principals and 68% of vice-principals were male. This is particularly the case in larger schools; 83% of the principals in schools of 200 or more students are men. Among schools of under 200 students, the percentage of male and female principals is much

closer (52% male and 48% female). The fact that 40% of the new principals appointed between 1991 and 1993 are women (compared to the status quo of 26%) may be an indication of increasing balance in this regard.

There are also gender imbalances evident in the teaching populations at the different grade levels and by subject area. Approximately 90% of the teachers at the elementary school level are female, compared to just over 40% at the high school level. It is also known that the majority of high school math and science teachers are men.

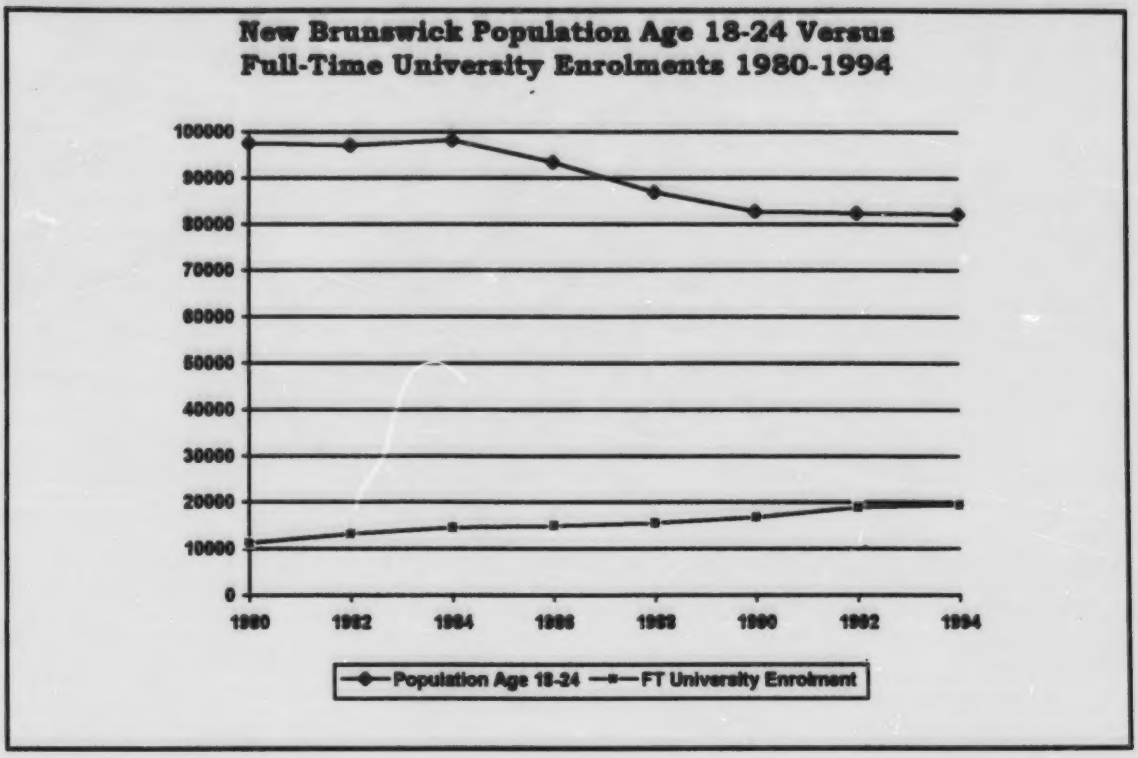
Implications

"Students must be educated in a learning environment that promotes equal opportunity and encourages [gender]-equity in all aspects of the school's curriculum, communication, policies, teaching methods, and assessment procedures, as well as in the attitudes of staff towards each other and towards students." [Sex Equity in our Schools: A Guideline for Action, 1989]

Over the last decade, a wide range of initiatives have been put into place with the goal of creating such an environment in New Brunswick schools. However, as stated by the Commission on Excellence in Education in their 1992 report, "to be successful, the process must be nurtured and complemented by a visionary human resource plan that provides female learners with a more dynamic and realistic image of the role of women in society, as well as more role models both inside and outside the school system. ...The gender imbalance at all management levels, from the Department of Education to the professional associations to the local schools, sends the wrong message to female students. At the very least, it creates a distorted image of the leadership and management capacities of women."

There are also implications for the imbalance caused by female domination of the teaching staff as a whole, in that there tends to be a lack of male role models in the system, particularly at the elementary level.

ISSUE 9: INCREASED UNIVERSITY ENROLMENTS



There are four major factors which can contribute to growth in university enrolments: I) changes in population, ii) changes in the proportion and age cohorts of the population who attend university, iii) changes in the amount of time individuals spend at university and when they enter university and iv) changes in number of students admitted from other countries .

10-15 years ago there were a great many predictions made regarding declining university enrolments . These predictions however have been unfounded, while the university age population numbers in the 18-24 age group have steadily decreased in New Brunswick, full-time university enrolments have continued to grow from other age cohorts and the length of time spent in post-secondary institutions. Within the next decade post-secondary institutions will need to continue to modify their recruitment tactics and delivery models to ensure adequate and sufficient numbers to sustain growth and on-going development within their institutions. The active participation in additional activities that ensure quality academic programs that are meaningful by increasing such activities as research- community, industrial and soci.-economic ties. These ties must be stronger, effective and more visible. The building of relevant programs/activities that service a broader client base will be imperative to their very mission statements. Cost recovery and self-financing will play a significant role in government and institutional policies and directives. Accountability, measurement and benchmarks will be redefined to incorporate visibility and transparency.

Analysis

Tables 1 shows that in the last 15 years the number of university age New Brunswickers between the ages of 18 and 24 has dropped from a high of almost 98,000 in 1980 to a low of 82,200 in 1994. However, during the same time period, full-time university enrolments have gone from approximately 11,000 in 1980 to almost over 19,000 1994. While overall enrolments in 1994-95 appear to have stabilized at least temporarily, the Full-time equivalents (FTE) enrolment has increased by over 10,000 since 1983-84. The increase in enrolment over the last ten years is thus equivalent to the addition of a university the same size as the University of New Brunswick.

Table 1

YEAR	N.B. Population Age 18-24	N.B Full-time University Enrolment	N.B. Participation Rate
1994	82200	19432	23.6%
1993	82200	19364	23.6%
1992	82400	18991	23.0%
1991	82400	17955	21.8%
1990	82800	16762	20.2%
1989	84800	16045	18.9%
1988	86900	15549	17.9%
1987	90100	15212	16.9%
1986	93400	14940	16.0%
1985	96300	14918	15.5%
1984	98200	14524	14.8%
1983	98400	14155	14.4%
1982	97100	13153	13.5%
1981	97200	12041	12.4%
1980	97600	11252	11.5%

Implications

The majority of the demand over the last ten years, has still been from those in the traditional 18-24 year age group. While there has been an increase in the number of enrolments of those in the higher age brackets, especially in part-time studies they are still a small percentage of total enrolments. However, if enrolment figures for the 18-24 year old age group do subside, institutions should be able to devote more effort to the non-traditional, life-long learners. So far the pressures of increased demand from the traditional clientele combined with fiscal restraint have not been conducive to aggressive exploration of the best means of delivering university programs to the life-long learners.

ISSUE 10: FULL-TIME UNDERGRADUATE ENROLMENTS BY MAJOR DISCIPLINE AND GENDER

Over the period from 1984 to 1994, full-time undergraduate enrolments in New Brunswick universities have grown by 30%. In this ten year period the enrolment of females has seen a 50% increase and males a 20% increase. Females now account for 54% of all enrolments in our universities. While this is significant in itself, enrolments in programs by gender show some interesting trends. There has been an increase in female enrolments in some of the traditionally "male programs", however, they are not as significant as originally believed. As we move more and more into a knowledge based industry where technologies change daily, universities need to continue to be cognisant of and reactive to the types of graduates industry will need and demand in a global workplace.

Participation by Gender in Major Disciplines

There has been a 30% increase in full-time undergraduate enrolments in New Brunswick universities in the past ten years. A very significant increase has occurred in the number of female enrolments in all disciplines. Female populations in New Brunswick universities now exceed male populations by 20%. (See Table Below)

Education programs: growth in enrolments has shown a 25% increase over this period. Participation by females is still dominant in this area of study although males have shown a slightly higher rate of growth in the past five years.

Fine and Applied Arts programs: there has been very little change in total enrolment numbers. A decrease in male enrolments of 17% has been replaced by a 18%increase in female enrolments.

Humanities and Related: programs have had significant increases in both male and female enrolments over the past ten years with a 56% increase in enrolments. Changing societal needs will continue to drive these enrolments with a need for greater awareness and rate of change in regard to Social Policy issues.

Social Sciences: have shown above average increase in enrolments particularly for females. In New Brunswick universities this discipline area has had a 90% increase of female enrolments.

Commerce and Administration: There has been only minimal change in total enrolment numbers over the last ten years. Male participation remain slightly higher at 54%, although the gap has narrowed with females making up 46% of enrolments.

Agriculture and Biological Sciences : has been an area of high growth with a 77% increase in total enrolments . It has an increasingly large number of female students who now account for over 60% of enrolments in this area of study.

Engineering and Applied Sciences: increase in female enrolments has exceed 100% in the past ten years, although growth for all enrolments has been only 17%. Females still represent less than 20% of all enrolments in these programs, however, this appears to be increasing by a significant percentage yearly with an upward trend since 1989.

Health Professions: nursing enrolments account for a large portion of the total enrolments in this discipline area, which continues to show a high female participation rate. Enrolments by

males has increased in this program area by 800% over the last ten years and males now currently represent 18% of total enrolments.

Mathematics and Physical Sciences: decreases occurred through the 80's in these programs. There has been a slight increase in total enrolment in the past five years, with a steady upward trend since 1990. Enrolment in New Brunswick is down by 15% since 1984 with female participation decreasing more than male participation. Males account for 75% of all enrolments in these programs

MARITIME PROVINCES HIGHER EDUCATION COMMISSION - 21 NOV 1995
Full-time Undergraduate Enrolments at New Brunswick Universities
By Major Discipline and Gender, 1984-85, 1989-90 and 1994-95

	1984-85	1989-90	1994-95		Ten Year Change 1984-85 to 1994-95	
					Number	Percent
Arts & Science - General						
Male	1,256	1,491	1,632	Male	376	29.9
Female	1,348	1,958	2,281	Female	933	69.2
TOTAL	2,604	3,449	3,913	TOTAL	1,309	50.3
Education						
Male	640	630	822	Male	182	28.4
Female	1,198	1,222	1,480	Female	282	23.5
TOTAL	1,838	1,852	2,302	TOTAL	464	25.2
Fine & Applied Arts						
Male	121	113	100	Male	(21)	(17.4)
Female	179	171	211	Female	32	17.9
TOTAL	300	284	311	TOTAL	11	3.7
Humanities & Related						
Male	288	380	474	Male	186	64.6
Female	433	558	648	Female	215	49.7
TOTAL	721	938	1,122	TOTAL	401	55.6
Social Sciences						
Male	677	748	873	Male	196	29.0
Female	1,005	1,320	1,897	Female	892	88.8
TOTAL	1,682	2,068	2,770	TOTAL	1,088	64.7
Commerce and Administration						
Male	1,375	1,464	1,385	Male	10	0.7

	Female	1,075	1,215	1,207	Female	132	12.3
	TOTAL	2,450	2,679	2,592	TOTAL	142	5.8
Agriculture & Biological Sciences							
	Male	290	278	444	Male	154	53.1
	Female	364	393	712	Female	348	95.6
	TOTAL	654	671	1,156	TOTAL	502	76.8
Engineering & Applied Sciences							
	Male	1,676	1,388	1,757	Male	154	4.8
	Female	201	214	432	Female	348	114.9
	TOTAL	1,877	1,602	2,189	TOTAL	502	16.6
Health Professions							
	Male	16	95	143	Male	127	793.8
	Female	413	612	674	Female	261	63.2
	TOTAL	429	707	817	TOTAL	388	90.4
Mathematics & Physical Sciences							
	Male	862	651	774	Male	(88)	(10.2)
	Female	342	226	249	Female	(93)	(27.2)
	TOTAL	1,204	877	1,023	TOTAL	(181)	(15.0)
Not Applicable/Not Reported							
	Male	51	50	72	Male	21	41.2
	Female	49	92	90	Female	41	83.7
	TOTAL	100	142	162	TOTAL	62	62.0

Implications

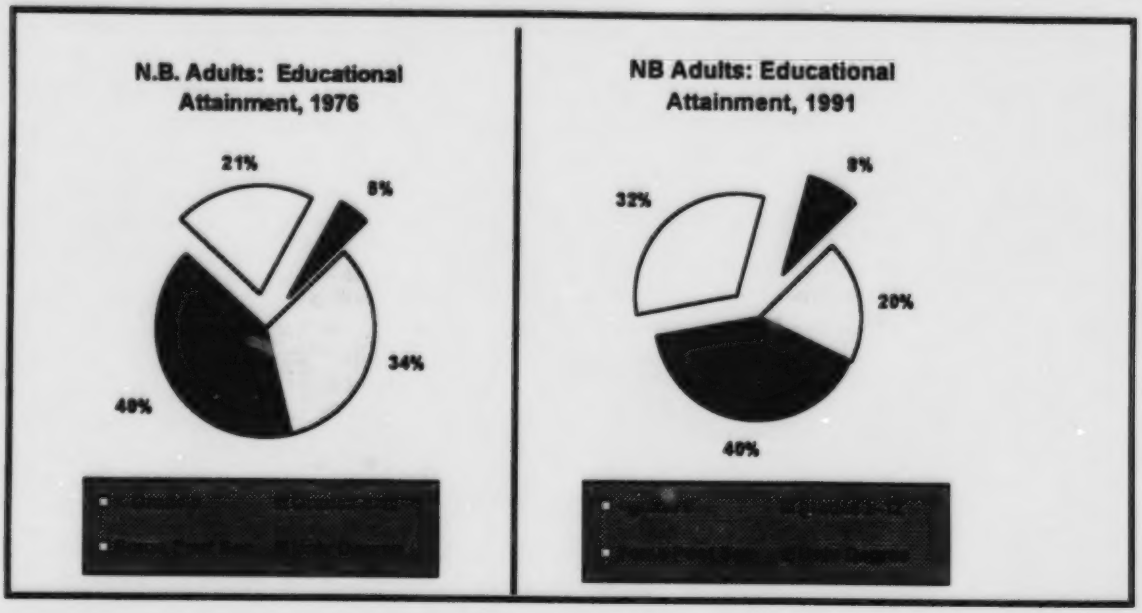
There are two questions to be asked here. First being, what are the real reasons the majority of students enrol in university programs? Second, will gender imbalances in non-tradition "female" or "male" programs ever become representative of the population at large? Data from 1990 graduate survey by Statistics Canada, which surveys students two years after graduation shows the picture somewhat different than enrolment trends when it came to finding full-time employment in discipline of study.

Graduates from university programs which had the highest rate of finding full-time employment were in the following disciplines : engineering and applied sciences, commerce and management, education and health sciences. In New Brunswick according to a recent publication from the federal Human Resources Department, graduates in these disciplines

were working full-time two years after graduation, at rates between 80% and 93%. The university discipline areas with the lowest full-time employment rates included: fine and applied arts, agriculture and biology, and the humanities. The full-time employment rates for graduates in these disciplines two years after graduation was between 60% and 65%.

This report also indicated that for university graduates in the total population, the median annual salary ranges were $23,119 for women and $45,763 for men. This appears to be changing, as for recent graduates the salary differential related to gender, shows a difference of earnings between men and women of only $2000.

ISSUE 11: EDUCATIONAL ATTAINMENT OF NB ADULTS



Description

During the Census taking, Canadians are asked to self report their highest level of educational attainment . The four categories reported in this chart show (1) the proportion of New Brunswick adults who have not yet achieved the international definition of literacy (<grade 9), (2) the proportion who have had some high school, and this includes those who have graduated from high school (grades 9-12), (3) those who have had some post secondary education or training, this will include completed or incompleted trade schools, community colleges, or private trades schools training, or incompleted university study, (some post sec); and (4) those who have attained a university degree.

Analysis

The charts show significant decreased in the formally illiterate (less than grade 9) from 34% of New Brunswick adults in 1976 to 20% in 1991, as well as important gains in the pursuit of post secondary study and university completions (taken together, these latter two categories have risen from 26% to 40% of New Brunswick adults over the 15 year timespan).

Statistics illustrate that average income is highest for those with a university degree. In 1993, the average earnings of a university graduate were $36,733. With high school completion and some post-secondary education, the average annual income was about $19,926. With a minimum of grade eight, the average stood at $14,892.

Implications

The Baby Boom or Big Generation is characterized by its appetite for education, and particularly for its pursuit of post secondary learning, and the charts clearly reflect this

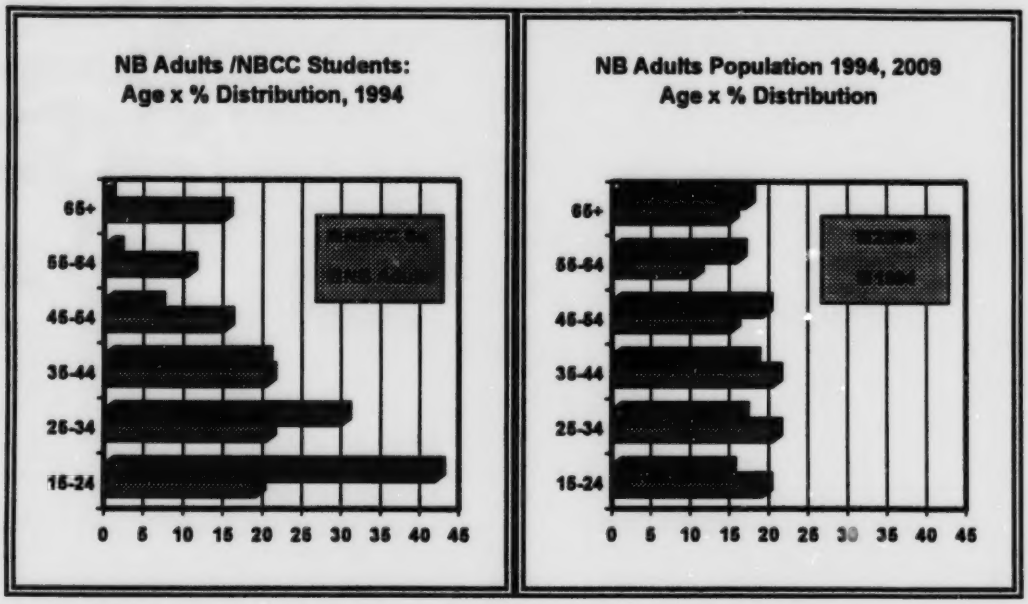
tendency. Furthermore, current data on enrolments in the New Brunswick Community College, reflect the presence of this generation. Aged 28-48 years of age today, this Generation has aged beyond the standard age for full time post secondary study. However, its appetite for post-secondary learning has not abated, as is reflected in the enrolments in the shorter term Community College programs (refer to the issue, *Age Distribution of NBCC Students).*

This large middle aging generation has impacted the New Brunswick Community College (NBCC) in another important way. Baby Boomers are now oriented towards practical learning, that is learning that will ensure practical skills that improve employment prospects. This implies several customer issues of concern. The first is the accessibility of the desired educational experience. While many individuals of this age may be available for daytime classes, the majority in fact would not. The NBCC must be flexible enough to make the right courses available outside regular hours, in fact, outside regular settings. Flexible scheduling and flexible delivery options, including distance delivery options gain importance in such a context. Other issues include the portability of learning credits from one institution to another, e.g. from Community College to University and sometimes high school, and vice versa. Related to this is receiving credit for "knowledge", thereby raising to the forefront the need for well articulated accreditation procedures, including portfolio accreditation, as described in the Excellence in Education Report, *To Live and Learn (1993).*

Demand is also high for learning experiences that have a strong practicum or on the job component, such as the co-operative education, or youth apprenticeship programs presently in place. These latter customer issues highlight the need for articulation between the learning institutions and between them and other partners such as the employer community. The challenge for the learning institution is to balance ever shrinking budgets one one hand, with the booming demand for workplace applicable and quality life long learning opportunities.

For the learning institution, the critical issues become: doing more with less money: keeping current and in touch with employer partners; establishing a seamless (and customer friendly) articulation between each level of secondary and post secondary education;.and finally, ensuring that educational products and services are provided in the time, place, and style appropriate for the adult learner.

ISSUE 12: AGE DISTRIBUTION OF NBCC STUDENTS



Description

The first chart demonstrates the age distribution of students registered in the fulltime training programs of the New Brunswick Community College (NBCC). It is compared with the age distribution of N.B. adults for the same year, 1994. The second chart shows the age distribution of N.B. adults in fifteen years time, 2009, compared to 1994.

Analysis

While the majority of adults today are between 25-54 years of age, by contrast the majority of students enrolled in fulltime programs of the NBCC are younger than 35 years. These fulltime programs include all educational services that exceed 5 consecutive days of training, with at least 6 hours of training daily. Other NBCC charts (not illustrated) make the distinction between the longer term and shorter term educational programs when looking at the age distribution of students. In these, the age distribution for the longer programs (20 weeks and longer), shows high concentration of younger students, readying for the worklplace. On the other hand, the age distribution of students in the shorter programs (up to 19 weeks of length) parallels that of the N.B. adult population, and thereby demonstrates the activity of the older student.

The second chart underscores the aging process expected of the New Brunswick adult population over the course of the next 15 years. It reveals a much smaller traditional college-aged population (aged 15-24). Furthermore, while today three of every five adults are under 45 years of age, in fifteen years time, fewer than half (48%) will be younger than this. This reflects the lower birth rates we are experiencing today in New Brunswick, along with the aging of the Baby Boom generation, which will be aged 43-63 years of age in the year 2009.

Implications

In a rapidly changing world, where working adults must be able to learn new skills quickly, and adapt to changing circumstances, life long learning becomes a key coping strategy. From a public policy point of view, institutions of higher education become important tools by which the government can assist the people to maintain their own self sufficiency, thereby ensuring the economic prosperity of the Province as a whole.

Thus, while one might normally expect that a much smaller college-aged population would mean the reduction of NB Community College activity, in todays context, the opposite is in fact the case. Changes within the NB Community College will come in the focus of its activity. While the one and two year programs must still be available to prepare younger adults for the workplace, the focus will be placed more on the training of individuals who are already in the workplace, and who are significantly older than the recent high school graduate.

These individuals will need to upgrade their skills while working, or re-orient themselves if changing career direction, or if laid off from further workplace restructuring. Moreover if indeed the retirement age does change, allowing people to continue working beyond age 65 years, educational services will need to shift to meet the needs of the older adult, territory in which the NBCC would have had little experience to date.

The NB Community College will, in short, need to adapt itself to provide relevant training opportunities in short time frames, and oriented to students who will need a different range of student services than the students the NBCC is accustomed to serving. Beyond the policy implications discussed in the issue, *Educational Attainment of NB Adults*, other concerns for the NBCC include re-orienting to the learning style of the mature adult, and providing educational programs and services that are accessible to this adult.

HOUSING

Members of the Baby Boom generation have had a major influence on our economy and our society at each of their life-cycle stages. It is safe to say that they will continue to exert such influence throughout their remaining years. During the twenty year period between 1971 and 1991, large increase in the rates of household formation and, subsequently, housing demand can be attributed largely to the maturing of the baby boomers. In 1971, the "boomers" were between the ages of 5 and 24 years. By 1991, they were in the 25 to 44 year age group, that period of life when most people leave their parental home and marry or live in other forms of households, often have children, and, in certain circumstances, divorce and form additional households. During that 20 year period, the total number of households in New Brunswick grew by 61%. By 1991, 45% of all households were headed by someone in the 25 to 44 year age group.

The housing industry has been hit especially hard in the ripples created by slow job growth. Because young people have found it extremely difficult to find full-time jobs and many have opted to live at home, there is very little demand for entry-level housing units.
Nicholas Chamie, Conference Board of Canada

By 2011 the majority of the baby boomers will be between the ages of 45 and 64 and are anticipated to account for more than 40% of all households; almost double in numbers from 1991 levels. Although there will be no "baby boomer" generation to swell the number of households, other choices are expected to continue to result in fewer persons per household - marriage rates are not expected to increase; divorce rates are not expected to decline; more seniors, especially women, are expected to be living for longer periods of time, part of that time alone. All of these factors will likely contribute to the growth of *One-Person* and *Lone Parent* households. Where marriages occur, it is anticipated that couples will continue to defer having children and will have fewer children than in previous decades; therefore, the number of *Couples without Children* households should increase at higher rates than the number of *Couples with Children* households, and average household size should continue to decline.

The baby boom peak will reach age 34 in 1994. That's the average age at which Canadians buy houses...So you'll see...plummeting prices some time after 1995. Your house is not going to be the great investment it was for your parents, because you didn't have four kids to drive up its value.
David Foot, *Let Us Now Appraise Famous Trends*

The largest impact on the size of the senior population will not be felt until the 2011-2031 period when the baby boomers move fully into the senior category. However, by 2011, senior households, while not increasing greatly in their *proportionate* share of all households, are expected to increase in absolute numbers by 47% over 1991 levels, and account for 23% of all households.

This aging of the population will result in an alteration in the profile of housing and household based social and economic issues during the coming years. It is anticipated that the tenure choices of all households in 2011 will mirror those of 1991. If there are no dramatic changes in income levels, employment patterns or population growth within the 25-44 year age group during the projection period, those factors which all heavily influence household growth and tenure choice, the number of households living in owned accommodation could increase by 70,000 and those living in rental accommodation by 24,000 households by 2011.

Given these same assumptions, ownership should continue to be the preferred housing choice of *Family* households, while *Non-Family* households, as a group, should be relatively evenly split between the two tenure types. Very young *Couples without Children* will likely continue to favour rental accommodation while those 25 and over will prefer homeownership, and hopefully, will be able to afford it. The number of *Couples with Children* households living in both rental and ownership housing will likely decline over the projection period. As for *Lone Parent* households, upwards of 23,000 could be living in ownership units and 16,000 in rental. The majority will be female-led and generally of lower than average household income levels.

Non-Family households living in owned units are likely to increase at a faster rate than those living in rental accommodation (81% compared to 68%). Higher percentages of young and old people living alone are anticipated to live in rental housing compared to their counterparts in the 25 to 44 and 45 to 64 year age groups.

No attempt was made to project affordability problems of future households. However, a look at 1991 distributions was undertaken to provide some insight into the potential for different households by age group and tenure type to experience difficulty in meeting their shelter costs. In 1991, young homeowners experienced more affordability problems than older homeowners. Senior renters, many of whom were females living alone, had some of the highest incidences of affordability problems as did very young households. Sixty-five percent (65%) of all rental households paying more than 30% of their total household income for shelter were headed by a female.

As to the distribution of households by community size, it is clear that rural areas of the province have gained in share of total population while urban communities have declined in share. In 1991, only thirty-five percent (35%) of all households lived in major urban centres of population 10,000 or greater. Seven percent (7%) lived in communities with population between 5,000 and 10,000, a further 17% in communities with population levels between 1,000 and 5,000, and fully 40% in communities of less than 1,000 population or in the rural parishes of the province.

The incidence of affordability problems was higher for senior renters in the major urban centres than for senior owners, and the problems were more severe for senior households headed by females than by males. It is also evident that the incidence of affordability problems was higher for senior owners in the major urban centres than in the more rural areas of the province. As with senior households, in the major urban centres, renter households with the head aged 25 to 44 had higher incidences of affordability problems than their owner counterparts, and those living in the smaller areas of the province had lower incidence than those in the major urban centres.

Owning a home has long been a dream of Canadians. And for the majority of Canadian households, that dream is a reality. In 1986, almost 5.6 million residential dwellings, 65% of the total, were owner occupied. While this level of ownership was down from 66% in 1961, all the decline had taken place by the mid-1970's. Since 1976, the rate of homeownership has not changed appreciably.

Janet Che-Afford, *Canadian Social Trends*

ISSUE 13: SHELTER AFFORDABILITY - SENIORS AND LONE PARENT FAMILIES

Figure 1

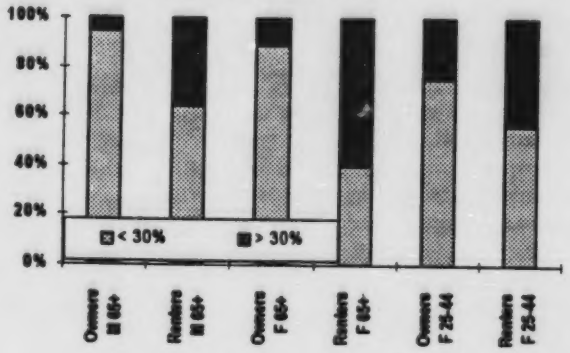
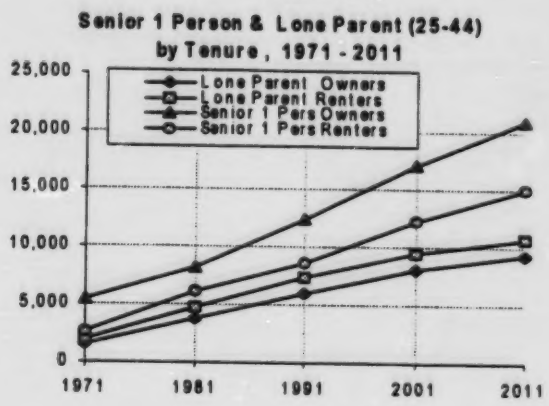


Figure 2



Description:

Figure 1: Shelter Affordability, as depicted above, is measured in terms of the amount of total household income which is directed toward the payment of shelter costs. Low to moderate income households paying more than 30 % of their total household income for shelter are considered to be experiencing housing affordability problems. This Figure shows the percentage distribution of all senior male and female homeowners and renters who paid more than 30% in 1991.

Figure 2.: The number of male and female seniors living alone and the number of households headed by a lone parent aged 25-44 for the years 1971 to 1991 were taken from various Censes of Population.[2]

Analysis:

Although the *average* income of the senior population is anticipated to increase somewhat over the next fifteen year period as more seniors enter the age group with higher levels of income from private pension and investment sources, there will continue to be a large number of seniors who have relatively low incomes. In 1995, 56% of seniors in receipt of OAS also received GIS. This indicates a high percentage of low-income among the senior group. The problem is especially prevalent among seniors living alone (74% of those in receipt of OAS\GIS were single pensioners, i.e., single, widowed, divorced). Senior persons paying more than 30% of their gross household income on shelter costs have traditionally been considered to be experiencing housing affordability problem. There were more than 9,500 senior households in such circumstances in 1991, nearly 6,700 of which were women.

A large number of households headed by a sole parent also had affordability problems in 1991. Nearly 9,000 such households (nearly 2/5 of all *Lone Parent* households) spent more than 30% of their total household income on shelter. For *Lone Parent* headed households living in rental accommodation, the problems were even more acute - more than half paid in excess of 30% and more than one quarter paid in excess of 50% of their income for shelter, leaving little residual income for other necessities.

[2] The projections for 1996 to 2011 were based upon (a) household projections developed using the Potential Housing Demand Model, Version 1.2, developed by CMHC, and (b) 1991 Census distributions of *Non-Family* households by type and sex of head.

The number of Senior households and *Lone Parent* headed households are anticipated to increase over the projection period. Although the number of *Family - Couples with Children* households are anticipated to decrease slightly over the projection period, there will be a continued need to consider the affordability situations of such households. Approximately 8, 000 such family households paid more than 40% of their household income for shelter in 1991.

Implications:

Senior women have a higher incidence of low-income than senior men. Although no attempts have been made to project average income levels of senior households, it is unlikely that the average incomes of senior women living alone will increase substantially over the projection period as many women still do not participate in the labour force or are employed in part-time or other forms of employment which have no or few private pension provisions. Given the level of population growth projected for the senior group, the number of seniors who experience affordability problems are likely to increase during the projection period. Similarly, the number of *Lone Parent* headed households is also expected to grow and, if their average income levels do not increase substantively, shelter affordability will continue to be a problem for such households. It is recognized that vacancy rates in the rental sector are increasing at the present time which could lead to a reduction in average rental costs. However, if a portion of the growing senior population wishes to downsize to rental accommodation, competition for rental units could lead to a reversal in the vacancy rate with subsequent upward pressure on rent levels.

ISSUE 14: POTENTIAL MISMATCH BETWEEN DEMAND AND SUPPLY OF OWNED UNITS

Figure 3

Projected Households by Type

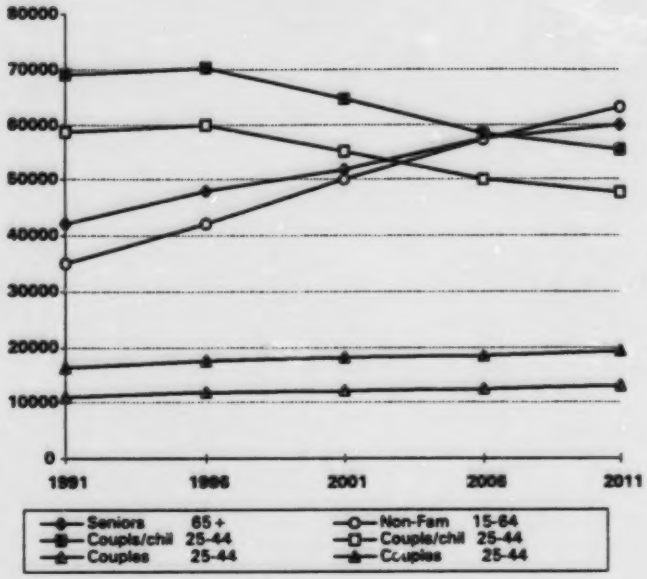
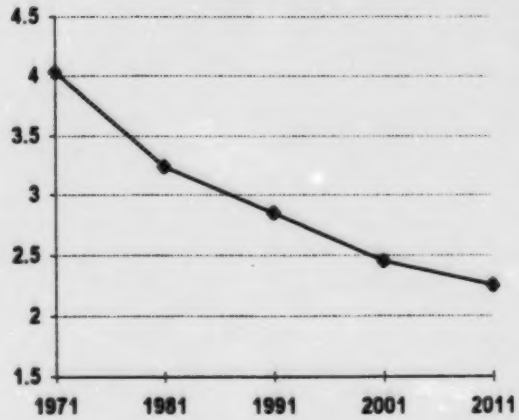


Figure 4

Average Household Size
1971 - 2011



Description:

Figure 1 above shows the number of households by family type for 1991 projected to 2011.[3] Average Household Size, or the average number of persons per household, as seen in the Figure 2, has been calculated by dividing the total population by the number of actual or projected number of households.

Analysis:

The number of senior homeowners is anticipated to grow over the projection period. Average household size is anticipated to decline. Statistics Canada has suggested that births and marriage rates will continue to fall, while divorce rates continue to rise. The number of *Non-Family* units headed by younger or middle-aged persons, the majority of which have traditionally been single persons living alone, is anticipated to increase. The number of family households which would normally generate a demand for larger ownership units - those 25-44 with young children present in the family unit - is anticipated to decrease over the projection period.

[3] These projections were developed using population projections developed by the Statistics Agency, New Brunswick Department of Finance, and the Potential Housing Demand Model, Version 1.2, developed by Canada Mortgage and Housing Corporation.

Implications:

The life expectancy of senior homeowners is anticipated to increase over the projected period, and an increasing number of these seniors will be living alone, many of whom will be female. There is an increased likelihood that a number of them may wish to downsize to smaller units if they find they are unable to maintain their larger dwellings due to health or income considerations. There is potential that a mismatch or imbalance could develop in the real estate market between the type of units offered for resale and the type and cost of units demanded by the bulk of potential purchasers - those in the 25-44 year age group. Given projected changes in average household size and the types of households, demand for larger units is likely to decrease. Housing demand generated by new households will tend toward smaller ownership units or rental accommodations. Recent construction activity has concentrated on large homes with expensive price tags, while production of smaller, more affordable housing has lagged or been non-existent.

The seniors who have a desire to downsize may find that there is no purchaser willing or financially able to acquire their dwelling, or that they are forced to sell their unit for considerably less than anticipated. Such circumstances could lead to affordability problems for those seniors who may have considered their ownership unit as an investment and who may be depending upon its eventual sale as a source of retirement income. The potential reduction in the market value of larger homes could have negative consequences for municipal revenues generated through property taxes given that, in New Brunswick, property assessments are based on market value of the dwelling. It should be noted that these problems are likely to be more severe in the two decades following 2011 as the baby boomers move *enmasse* into the senior category.

LABOUR FORCE AND EMPLOYMENT

It is through the efforts of our labour force that we assure our economic prosperity. A description of our labour force at any time will give us an idea of the type of human resources we as a province are applying to this prosperity.

We define the labour force (LF) as those working age adults (15 years and over) who are either working or actively looking for work. A demographic description of the labour force will give information about the number of such LF active adults, their age and gender, and the percentage of LF active versus LF inactive adults. Such information will help in making any public policy decisions to redress imbalances judged to have serious long-term effects on the prosperity of our Province.

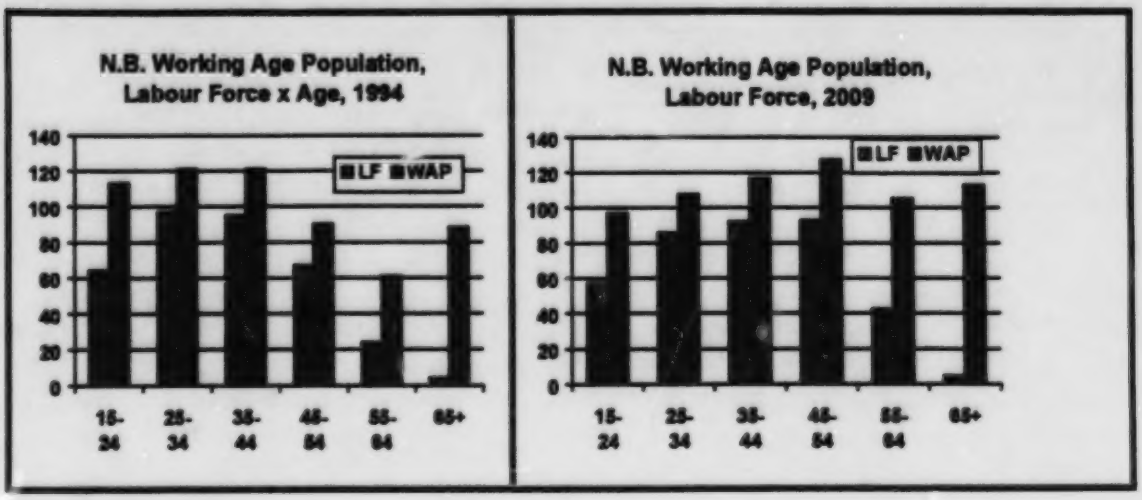
We already know that the New Brunswick (and Canadian) population is rapidly aging, and surviving longer in old age. The working age population, defined as all adults over 15 years of age, is likewise aging. In fact, while in New Brunswick today three of every five working age adults are under 45 years of age, in fifteen years time, fewer than half (48%) will be younger than this "middle age"[i]. This is clear evidence of the aging of the "post war baby boom". While this group is aged 28-48 years today, it will be 43-63 years of age in fifteen years time. On the other hand, we also know that we are having fewer babies, and that there will be a marked shortage of younger people entering the labour market. Thus, while the youth cohort of 15-24 years of age comprises 19% of New Brunswick's working age population today, or one in five working age adults, it will shrink to 14% - or one in seven adults - in fifteen years time.[ii] It will also be the smallest age cohort of working age adults in this province.

While these two demographic factors will significantly alter the shape of our future work force, other non demographic factors must be considered when making policy decisions about our human resources. For example, while the workforce is aging, the workplace is likewise undergoing significant change. We have passed from an agricultural to an industrial economy over the past century and are today firmly settled in the post-industrial or information economy. This economy is heavily dominated by the production of services, depends a lot upon new technologies and for the first time in history the "local marketplace" has expanded to encompass the entire globe. While products and services are coming to local stores from around the world, so too is competition for our own products and services. Because technology has become the great equalizer, any nation today that chooses, is able with the intelligent application of technology to bring itself quickly up to speed in any area of human activity, and compete aggressively in the global marketplace with that good or service.

The following analyses are looking at the demographics of the labour force and their expected effect upon our economic future. While active involvement in the labour force is not the only contributor to the economic prosperity of society (investment, for example, being another), it is key, and thus merits serious attention.

Another possible policy response to the pressures on government budgets that originate from aging is to attempt to temper the aging effects by increasing the workforce. Options that have been suggested include raising the participation rate, increasing immigration or increasing working lifetimes.
Jean-Claude Paye, Secretary General, Organization for Economic Co-operation Development

ISSUE 15: THE AGING OF THE WORKFORCE



Description

The working age population (WAP) shows the numbers of individuals in every age group or cohort. The labour force (LF) shows the numbers of these people in each cohort who are working or actively looking for work. The difference between the two bars for any age group shows the number of adults who are neither working nor looking for work. The figure shows that both the labour force and the working age population in New Brunswick are aging, changing the look of the adult population and of the working force. Moreover, the expected large population of working age elderly (65+, even 55-64 yrs of age), contrasts sharply with the expected low numbers of these people who will be active members of the labour force.

Analysis

These charts demonstrate that high numbers of the older age groups (55 years and over) and moderate numbers of the youngest age cohort are inactive in the labour force. Should these trends continue, as projected in the labour force figures for 2009, we will have a seriously aging working age population, with relatively fewer younger persons actively contributing to the economy of the province. One in every three working age adults will be 55 years of age or older. Current life expectancy figures suggest that men will live another 25 years beyond this point (55 years is becoming an early retirement reality for many). Women are expected to live 35 years, or more beyond this age.

If a persons's career begins as early as age 20, and continues until early retirement at age 55, that person would have been an economically productive member of society for 35 years. It would be 45 years in this scenario, if retirement came at age 65. With today's life expectancies reaching 80 or 90 years of age, this means this individual will have economically contributed to society for approximately - and perhaps less than - half of his or her lifetime. Furthermore, this applies only to the 6 of 10 adults who are actually active participants in the paid labour force. While this analysis does not take into account the value to the province of the non paid "labour force", neither does it question its validity nor usefulness. The key point of the analysis is an economic one, and asks if, given our demographic future of a

heavily dominated senior population, will we be able to afford continuing on our present course?

Implications

1. Financial Burden of a Retired and Aging Population - the most obvious implication is a heavy load upon the working adults of the future, whose tax dollars must contribute to supporting an ever burgeoning, and long surviving, senior population. The most obvious costs will be income support programs and medical facilities and services. While much has been made of the higher educational attainment of the the Baby Boom Generation, suggesting their ability for self support in retirement (through RRSPs, private pension plans, private investment income etc.)[4], this point may be a little over stretched.

In New Brunswick today, for example, one third of seniors over 65 years of age report annual incomes of less than $10,000. Only 8% - or one in 12 - report annual incomes in excess of $40,000[5]. While we may think that retired Baby Boomers will be more prosperous than those retired today, as indeed the prospects for many may well be, it is important to consider the issue. For example, the Baby Boomer generation, or the "me" generation is characterized not only for its thirst for education, but also for its tendency to delay childrearing. While delayed childbirth may have helped in establishing careers, it also means later empty nests.

Few individuals today anticipate an empty nest at the previously traditional age of 45 years. Instead, many are looking at supporting heavy post secondary costs of their offspring, and of keeping these same children at home while they complete their studies, or go through layers of non standard jobs before finding employment sufficient for self sustainment. Today, significantly high numbers of offspring cannot afford to leave the nest until their mid to late 20s.[6]

Furthermore, reconsider the job situation today: high numbers of non standard jobs for new entrants and restructuring, downsizing, encouragement for early retirement and other employee buyout packages for the older workers. The older workers have traditionally come to expect that the pre retirement period of ages 45-65, that is from the empty nest to retirement, is the time to accrue pension credits: whether from personal savings, investments and RRSPs or higher credits in company pension plans. These in fact must be the high earning years, to finance the lengthy post earning years, the retirement that could last a quarter of a century. Instead, today's reality is that these workers - who include the first wave of Baby Boomers - are facing a "jobless" economic recovery, and the prospect of passing some of these pre-retirement years subsisting in "non-standard" jobs, should they find employment. When they reach retirement, they will be expecting public income support in the form of the old age security and the CPP into which they have paid all their working years. On the other hand, these funds are currently in difficulty, so how will they stretch to support the 24% of Canadians who will be in retirement?

Pension dollars will need to come from the tax base. However, the current rise in "non-standard" jobs, including the plethora of ghettoized minimum wage service jobs, indicates that the economy may indeed be unable to support such a heavy burden. In a convincing argument economic analyst Jeremy Rifkin[7] recently concluded we are looking at "a future

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[4] Pappy Boomers ...

[5] Lachance, Nathalie, "The Elderly in New Brunswick", HRD-Canada, Fredericton Office, Internal Document, August,1995

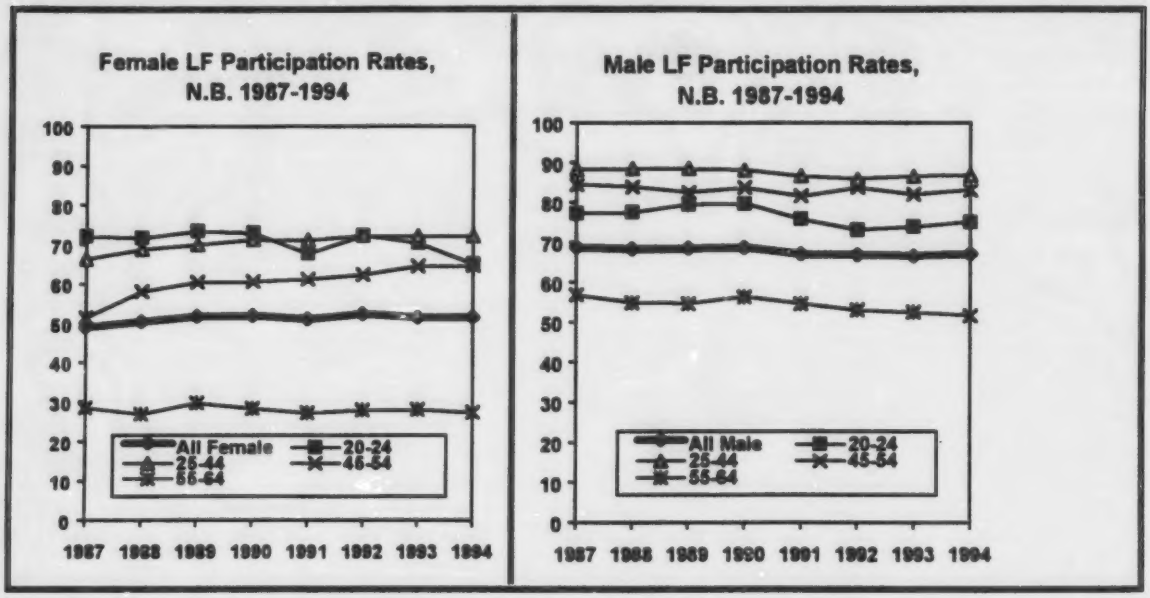
[6] Boyd, Monica and Norris, Doug, "Leaving the Nest? The Impact of Family Structure" , Canadian Social Trends, Autumn, 1995 (StatsCan Catalogue 11-008E)

[7] Rifkin, Jeremy, "A Future Without Jobs", interview in Across the Board, July-August, 1995

without jobs". His most optimistic prediction is that up to 20% of the labour force will be hired in the good jobs: intellectually challenging and well paid. These will go to the most highly educated and technologically attuned members of the labour force. The rest of the population, the other 80% will rely upon the ghettoized service jobs, if they can find them. Such a polarization of the labour force lends itself poorly to the vision of a broad tax base from which to provide services to society along with overburdening pension and public health costs.

2. Maintaining A Winning Economy With An Aging Workforce - The second important implication is that we are facing an aging workforce, at a time when the technology driven economy requires the creativity and flexibility characteristic of a younger work force. How will New Brunswick support and encourage the sort of creativity and innovation of its older workers, the sort of attitude needed to ensure continued economic prosperity?

ISSUE 16: THE IMBALANCES: YOUTH AND WOMEN



Description

The labour force (LF) participation rates for each age cohort, for each gender, show the proportion of all adults in that age group who are either working or looking for work. The charts illustrate the lower LF rates for females than males. They also demonstrate that the youth cohorts suffered the most from the 1991 recession, and have not yet recovered.

Analysis

1. Low female labour force participation - the women's rate is generally far below that of men: at present it is 51.5% versus 67% for men. While women's labour force participation has been steadily rising since the 1960s, it has remained relatively stable over the past 8 years in New Brunswick, and not recovered from the 1991 recession. Two groups have, nonetheless, maintained a steady growth despite the economic situation. These are women aged 25-44 and 45-54 years old. These include the Baby Boom and WWII generations. While their LF activity does not yet equal that of their male peers, if they maintain their growth curve, this group of women will be the economically best prepared for retirement in our history. That is, provided the funds to which they contribute, notably the CPP will be there for them. Regarding private funding for pensions, the wage gap beween men and women may mean fewer RRSPs, and private investments for these women. Likewise, the lower level of unionization of New Brunswick women may mean fewer are contributing to company pension plans. Finally, the cohort nearer retirement, those 55-64 years of age, show a very low, but tenacious participation rate of 27%: early retirements or layoffs do not seem to have affected their LF activity, as it has for their male counterparts whose attachment to the labour force has been much stronger.

2. Greater vulnerability of the youth cohorts (20-24 years of age) - between 1990 and 1991, that is at the onset of the 1991 recession, the LF participation rates of the 20-24 year olds dipped an average of 4.6%, twice the fall taken by any other group. Furthermore, unemployment jumped by 3.5% to a 20.9% high, in stark contrast with the average

unemployment rate for the province of 12.8% that year. The female youth cohort has not rebounded since 1991. Have these women given up, or returned to school? The male cohort is steadily recovering. However, today only 7 of 10 New Brunswickers in this age group are active in the labour force, and one fifth of these - or 1.4 of the 7 - are unemployed ... meaning a little more than half (5.6) of New Brunswickers aged 20-24 years of age are employed.

Implications

1. Low female labour force participation - there is no doubt that equal participation in the labour force between men and women could eventually lead to greater social equality, greater tolerance and perhaps a reduction in the gender wage gap. Likewise, the economic stimulation provided by the additional female entrants to the labour force would increase the overall prosperity of the province. However, while measures designed to encourage women's economic equality with men are desirable, they cannot exist in isolation. Women still tend to shoulder child care and familial responsibilities. Likewise, women tend to be whom demographers mean when they speak of the "sandwich generation", or those individuals caught beween caring for young children, only to be later faced with responsibility for elderly parents. In both cases, social support systems have heretofor proved inadequate to assist women in these tasks. As a result, women's labour force attachment on the one hand, and career aspirations on the other are compromised. The elder care situation, occuring as it does later in the women's working life, when her (or her husbands) parents would be in need of care, may cause a woman to short circuit her own chance to peak in her career. She may, indeed, "create her own glass ceiling[8]" by reducing work hours to care for her family.

2. Greater vulnerability of the youth cohorts (20-24 years of age) - there is no doubt that high unemployment, long stints in "non-regular" employment, and moving in and out of the labour force will compromise the longer term labour force attachment of this most important age group. Those aged 20-24 years today will be in their prime earning years when the largest cohort - the Baby Boomers - retires. With a prolonged weak labour force attachment, earning power for this cohort could never reach its potential, or be very slow to do so. The economy will suffer, and we will be ill able to afford the cost of sustaining ourselves when our numbers will be so heavily dominated by a dependent aging population.

[8] "Taking Time to care for the elderly: as the population ages, work-family issues must be addressed", an articles in the Telegraph Journal (when??) the articles is excerpted from discussions on eldercare and the workplace, sponsored by the Conference Board of Canada

ISSUE 17: ABORIGINAL UNEMPLOYMENT

Description

Table 2 indicates that the highest level of formal schooling attained by the adult Aboriginal population is similar to that for the total population. Only in the category of 'One or more university degrees' is there a distinct difference, with only 4% of the Aboriginal population in this category compared to 8% for the total population.

Table 2
Highest Level of Schooling, New Brunswick, 1991

	Aboriginal Population(1) (estimated)	Total Population (2)
Less than grade 9	21%	20%
Secondary (3)	43%	40%
Some post-secondary education	13%	9%
Post-secondary certificate or diploma	18%	22%
One or more university degrees	4%	8%

(1) source: calculated using Indian Affairs data and the 1991 Aboriginal People's Survey for the Aboriginal population aged 15 to 64.
(2) source: 1991 Census Cat No. 93-328 Table 2; which includes the Adult population aged 15 and over.
(3) includes persons with some secondary schooling as well as high school graduates.

While the 1991 Census showed an unemployment level for the total New Brunswick population of 15%, the unemployment rate for the Aboriginal population was much higher -- approximately 33%. At the same time, the labour force participation rate for the Aboriginal population was significantly lower than that for the total population. (See Table 3.)

Table 3
Unemployment and Participation Rates, New Brunswick, 1991

	Aboriginal Population(1)	Total Population(2)
Unemployment Rate	33%	15%
Participation Rate	46%	63%

(1) source: calculated using Indian Affairs data and the 1991 Aboriginal People's Survey.
(2) source: 1991 Census.

Analysis

The high rate of high school drop-outs among Aboriginal students continues to be a concern. However, considerable gains have been made in the educational attainments of Aboriginal people. National data from the Department of Indian Affairs indicates that -- for on-reserve status Indian pupils -- the percentage of grade 1 pupils remaining in school until grade 12 was only 4.3% in 1961/62; it increased to 15.6% in 1971/72, 20.7% in 1981/82, and 53.6% in 1991/92.[9] Similarly, the number of status Indians enrolled in post-secondary institutions increased from 2,684 in 1976/77 to over 23,000 in 1993/94.[10]

In 1991 the Aboriginal unemployment rate was more than double the provincial rate. Indeed, the low labour force participation rates for Aboriginal people suggest that the actual level of unemployment among the Aboriginal population is even higher. Figures on unemployment and labour force participation include only those individuals who are either employed or actively seeking work. When people repeatedly have no success in finding employment, they are not apt to continue to actively seek employment and therefore they would not be included in the labour force statistics. If the participation rate of the Aboriginal population had been the same as the provincial participation rate in 1991 (with no increase in employment), it would have resulted in an Aboriginal unemployment rate of 51%.

Implication

Aboriginal young people are more highly educated than ever before. The combination of a large and well-educated group of young people is apt to create a more demanding dynamic in the Aboriginal population.

Unless significant progress is made in Aboriginal people obtaining employment, the Aboriginal unemployment rate will increase markedly as young, better educated Aboriginal people enter the labour force in greater numbers.

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[i] Source: N.B. Statistics Agency, with projections based upon Scenario #
[ii] ibid

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[9] Department of Indian Affairs and Northern Development, Basic Departmental Data -- 1994, 1994, p.39.
[10] Ibid., p. 41.

GOVERNMENT SERVICES

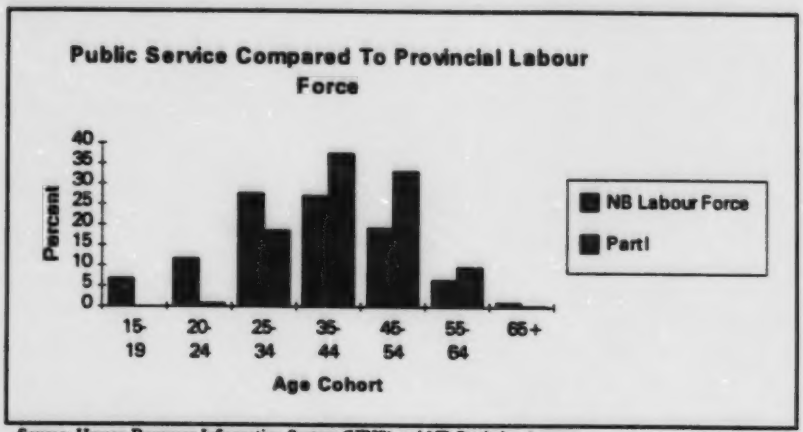
Human resources are an organization's most important resource because, without them, the other resources available to an organization (financial, information, materiêl) cannot be used effectively to achieve the goals of the organization. Demographic change will have a significant impact on government policy, strategic direction, and on the services provided by government. Within the public service itself, demographic factors must be acknowledged and internal policies and management practices must be re-designed or adjusted to properly reflect demographic trends. If these trends are identified correctly and addressed proactively, the public service will be well positioned to continue to be effective in its service delivery functions well into the future.

We are creating an affordable, highly flexible, and decentralized service delivery netowrk to deliver the social support Canadians need in today's society.
Lloyd Axworthy, August, 1995

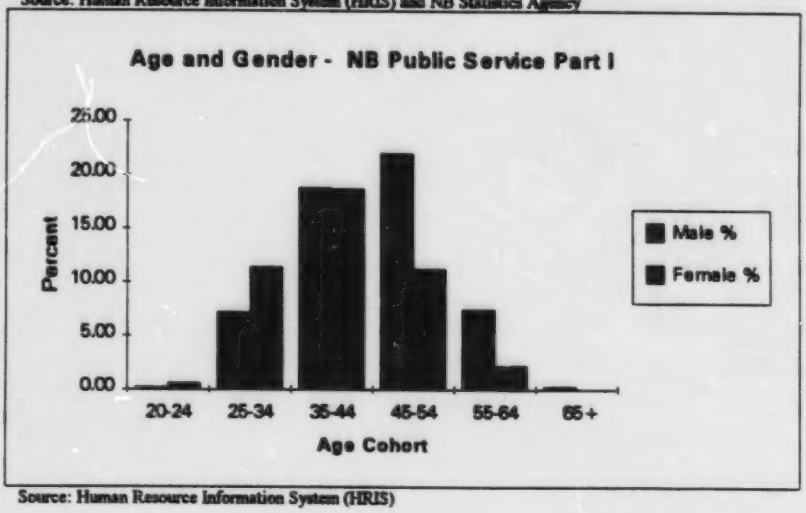
Issue 18: Public Service Renewal

Description:

The Human Resource policy applied to employees of Part I of the Province of New Brunswick has evolved incrementally during the last thirty years. During this period, while the organization has increased greatly in size, there has been a single predominant model or set of principles which have defined the way in which public services were designed, managed, delivered and evaluated. This model has determined the nature and content of the human resource policy which has been applied to Part I public servants. As a result of this model, many current internal human resource policies and practices reinforce notions such as security of employment and attachment to a single organization for the duration of one's career. Current practices stemming from this model may reward longevity rather than performance and some may argue that they are somewhat paternalistic in their approach. A number of demographic, social, and economic realities suggest that human resource policies, programs, and employee compensation systems will have to be enhanced and/or re-designed if they are to be effective in an organization that will likely undergo significant change in the near future.



Source: Human Resource Information System (HRIS) and NB Statistics Agency



Source: Human Resource Information System (HRIS)

In addition to the demographic information reflected in the charts above, the analysis and strategies contained in this section of the report are based on the following trends and assumptions:

1. The current service delivery model will be replaced to a significant degree by a model in which government will tend to set directions and standards rather than assume responsibility for direct delivery of services as the default approach.

2. Information technology will increasingly be used to deliver some services which have traditionally been delivered by employees. These services may be delivered without any direct intervention by employees.

3. While the New Brunswick economy will exhibit better than average performance, the current policy of financial restraint by government will continue and expenditure levels resulting in annual deficits will not be tolerated in the future.

4. Employees will have access to improved technologies which will improve the nature, quality, and quantity of the results they are able to produce and which will change the nature and size of the workforce employed in Part I of the public service.

Analysis:

In the case of the New Brunswick labour force, 46% of all participants are less than age 35. In the case of Part I of the New Brunswick public service on the other hand, only 19% of employees are less than 35.

A relatively large proportion of the employee group (19%) is within 10 years of retirement assuming that age 60 is the normal retirement age. Since many of these employees are now over the age of fifty, many of them may retire prior to the year 2005. By the year 2010, that is in fifteen years, 38% of the employee group will likely have retired. It could be expected that these employees will leave the organization on a continuous basis during the fifteen year period since this group includes employees who are currently forty or greater and less than sixty.

As an employer, the Province of New Brunswick has relatively few young people (age 30 or less) in Part I of the public service. This age group makes up only 8.3% of the employee population. Since the average age of all new employees on commencement during the last year was 36.5, the relative weighting of young employees is not likely to change.

Most employees in Part I are career public servants as evidenced by the fact that their average length of service is 13 years. Fully 54% have served the organization for ten or more years.

Terminations (for all reasons including retirement) are currently exceeding new hiring activity. In the 1994/95 fiscal year, there were 405 terminations and 289 new civil service regular appointments were made. Of the terminations, 57% were male (compared to the total employee population which is 56% male) and 43% were female (compared to the total employee population with is 44% female). Of the commencements, 52% were male and 48% were female. One can conclude, then, that termination and commencement activity will not make a significant change in the gender distribution of the New Brunswick Part I public service.

The Part I management group appears to be similar in its age distribution to the full employee group and consequently, members of the management group will exit the system in relatively large numbers during the next ten to fifteen years. Since managers of both genders are about the same age, on average, retirement will cause both groups to diminish equally over the next few years.

CHILDREN AND YOUTH

ISSUE 19: SOCIO-DEMOGRAPHIC FACTORS AFFECTING CHILDREN

Description

Demographic changes in the child (0-14), and their parents[1], persons of child-bearing age (15-44), will impact upon the demand and utilization of formal support services for families. Figure 4 shows the growth of the general population compared with the less than 15 years population over a 15 year period from 1994 to 2009. Over the period, the general population is expected to increase by roughly 5% (759,300 in 1994 to 795,300 in 2009), while the less than 15 population is forecast to decrease by 14% (from 150,200 in 1994 to 128,700 in 2009).

It is important to note that a decrease in child population does not necessarily equate to a decrease in services needed for children. There may be fewer of them, but more may require services. The child population (0-14) is decreasing gradually from 1994 to 2009, declining on average by approximately 1,400 persons per year. One can infer that based on factors such as increasing divorce rates, the working poor and lone parent families headed mainly by women, coupled with employment uncertainty, future parents of children (0-14) may continue to encounter struggles in the development and socialization of their children. Consequently, these children will have a need for services.

According to the Statistics Canada Population Censuses, the divorce rates for New Brunswick have increased from 1% in 1981, to 2% in 1986, to a high of 4% in 1991. Furthermore, according to the 1993 Poverty Profile[2], in Canada as a whole, 752,000 (53%) poor children live in two-parent families, whereas 595,000 (42%) poor children live in single parent families headed by women. With the exception of Nova Scotia and British Columbia, all of the other provinces, including New Brunswick, follow this trend. This puts an end to the general myth, that poor children tend to come from lone parent families, headed by women. The definition of poor children also includes the working poor. As shown in figure 3A, in New Brunswick, the poverty rate of children of single parent mothers was 76.6%, representing approximately 15,000 poor children. The poverty rate of two parent families in New Brunswick was lower at 10%, however, this also represented approximately 15,000 poor children in the province. Altogether in 1993, there were approximately 31,000 (17.5%) children in New Brunswick living in poverty, down from 32,000 (18%) in 1991.

Analysis

Figure 5 shows that there were 150,200 residents in New Brunswick in 1994 who were less than 15 years of age. By 2009, this figure is expected to decline to 128,700, a 14% decline. A lower than average fertility rate (1.54 versus 1.69 nationally as of 1992; Statistics Canada Cat. 91-524E)(see figure 3B) and a higher than average infant mortality rate (6.3 versus 6.1 nationally as of 1992; Statistics Canada Cat. 82-003)(see figure 3C) could mean N.B.'s younger population is declining more than the national average. However, it must be noted that infant mortality rates in New Brunswick have been improving steadily in recent years, from 7.2 per 1,000 live births in 1988 to 6.3 in 1992. The rate of infant deaths in New Brunswick has declined even more rapidly than that of Canada as a whole. This is positive for New Brunswick since the rate of infant mortality is one of the most reliable indicators of a province's health status (Statistics Canada Cat. 84-542; Statistics Canada Health Reports Supplement No.15 1990 Vol.2 No.1.)

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1 The parents group is defined as persons aged (15-44).

2 The Poverty Profile, a report by the National Council of Welfare, defines children as persons (0-17) years of age.

Although there will be a smaller population of children in the Province, there are a number of socio-economic factors that could cause more children to be considered "at risk"[3] in their development. Poverty is considered a key risk factor for the healthy growth and development of children. Associated with poverty is a higher prevalence of abuse and neglect, developmental delays and lower achievement in school. The growing incidence of poverty in the 15 to 30 age group, especially among women, will mean a higher percentage of the younger adult population may require formal support services. According to the Poverty Profile 1993, 76.6% of lone female parents in New Brunswick are classified as poor, which puts at risk the healthy growth and development of 15,000 children. In addition, a further 15,000 children are at risk because of low incomes in two parent families in the province.

Low birth weight is another risk factor. A 1990 study found that the incidence of low birth weights (under 2500 grams) was more common with low income families, single mothers, and teenaged mothers (Statistics Canada, *Health Reports*: Vol. 6, No. 2, 1994). Furthermore, approximately 5.53% of births in the Province are classified as low birth weight births (Statistics Canada, Canadian Centre for Health Information)(see figure 3D). This percentage has remained fairly constant over time. In the past few years, both the provincial and federal governments have initiated programs, such as Early Childhood Initiatives (ECI) and Canada Action Plan for Children (CAPC), to address these problems.

Another cause for concern especially given the high percentage of dual-earner and single parents in the labour force, is the availability of childcare. Quality childcare is considered to be an investment in healthy child development. In 1992, roughly 5% of N.B. children from birth to 12 years of age requiring care were in licensed daycare compared to 10% nationally (Canadian National Child Care Study, 1992), indicating that N.B. parents use licensed day care at half the rate of Canadians in general (see figure 3E). This may reflect problems in accessibility, affordability or availability, as well as parental choices.

Implications

The socio-demographic characteristics of the parents of the children (0-14) suggest that there may be an increased number of children considered to be at risk. In an environment where the population of our future caregivers is shrinking, it will be important to invest early in the health and development of our children to ensure they achieve their optimal potential.

3 Defined as children at risk for: a) physical or emotional problems secondary to known health challenges, b) delays in growth and development, and c) neglect (intentional or unintentional).

ISSUE 20: OUR CHILDREN: STRENGTHENING OUR HUMAN POTENTIAL

Figure 1
Proportion (%) of Total Population
Number of Persons in Age Cohort

Age	1994	2009	2024*	% Change in proportion 1994-2024
0-14	20.0 150,200	16.0 128,700	14.0 110,200	-30.0 40,000
15-64	68.0 515,700	70.0 553,700	63.0 504,600	-7.0 11,100
65+	12.0 93,500	14.0 112,900	22.6 179,300	88.3 85,800
Total Population	759,300	795,300	793,900	

* Population projections, 1994-2009, prepared by N.B. Statistical Agency were mathematically extended to 2024. This means that they do not take into account changes in fertility, interprovincial migration, and future life expectancy beyond 2009. Due to these limitations, mathematical extensions of population projections are not viewed as reliable, by the N.B. Statistical Agency. However, these figures can be insightful for planners, policy makers and stakeholders interested in the future implications of demographic change.

Description:

Population projections for the age group 0-14 indicate that there will be a decrease (from 150,200 in 1994 to 128,700 in 2009) in that segment of the population. However, from 1994-2009, the general population is expected to increase by roughly 5% (from 759,300 in 1994 to 795,300 in 2009). This decrease in the child population suggests there is a strong need to ensure that each child, within his/her capacity has the opportunities and support to develop the necessary attributes to contribute to the social and economic well-being of the province. Development of children to their fullest potential is fundamental to our future.

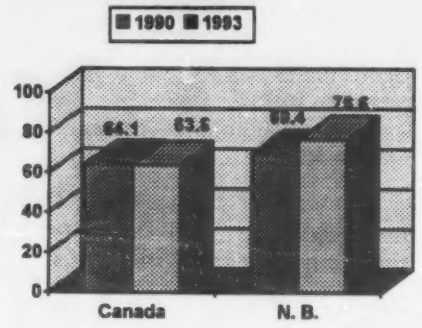
Analysis:

Figure 1 shows that the New Brunswick population less than 15 years of age was 150,200 in 1994. By 2009, this figure is expected to decline to 128,700, a 14% decline. A lower than average fertility rate, 1.54 versus 1.69 nationally as of 1992 (Statistics Canada Cat. 91-542E) and a higher than average infant mortality rate, 6.3 versus 6.1 nationally as of 1992 (Statistics Canada Cat. 82-003) could mean New Brunswick's younger population is declining more than the national average. It is anticipated that this segment of the population will continue to decrease as reflected in the approximate projections made for 2024. It should be noted that New Brunswick infant mortality rates have been improving steadily in recent years, from 7.2 per 1000 live births in 1988 to 6.3 in 1992. The rate of infant deaths in New Brunswick has declined even more rapidly than that of the rest of Canada as a whole.

Implications:

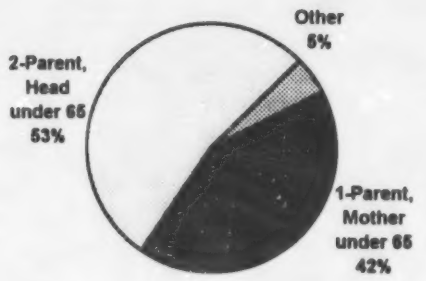
In order for New Brunswick to continue to thrive and develop, it is critical for all children to receive the care, nurturing and education to enable them to develop to their fullest capacity. They will be fewer in number and will be required to take on a full range of responsibilities. Their capacity to acquire and apply skills and knowledge and be leaders will determine New Brunswick's future. There will be a large, aging and influential segment of the population. The younger segment of the population will need to be motivated and provided opportunities to continue to improve their life skills, education levels and technical skills. Increasing per capita productivity is likely to continue to be necessary. Our consumer-oriented society depends upon the spending power of individuals to purchase goods and services.

Figure 3A
Percentage of Poor Lone Parent Families
Canada and New Brunswick



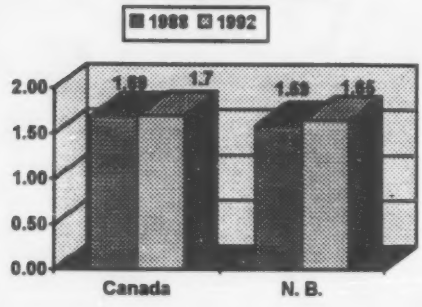
Source: Poverty Profile, 1990, 1993

Figure 3B
Poor Children by Family Type
New Brunswick, 1993



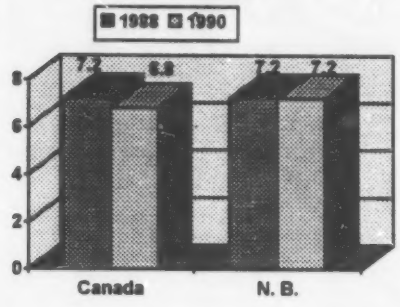
Source: National Council of Welfare, Poverty Profile, 1993

Figure 3C
Total Fertility Rates
Canada and New Brunswick



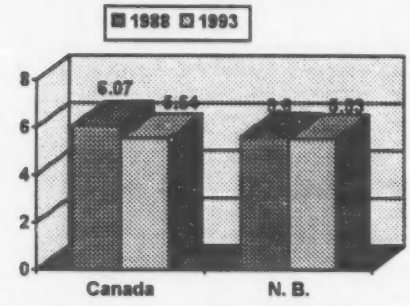
Source: Statistics Canada, Health Statistics Division, Health Indicators Database, 1994

Figure 3D
Infant Mortality Rates
Canada and New Brunswick



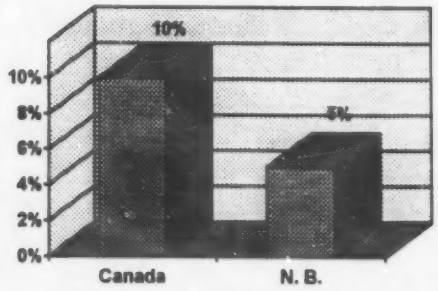
Source: Statistics Canada, Canadian Centre for Health Information

Figure 3E
Low Birth Weight Rates
Canada and New Brunswick



Source: Statistics Canada, Canadian Centre for Health Information

Figure 3F
Percentage of Children (0-12 yrs.)
in Licensed Daycare, 1992



Source: Canadian National Childcare Study

Youth Issues

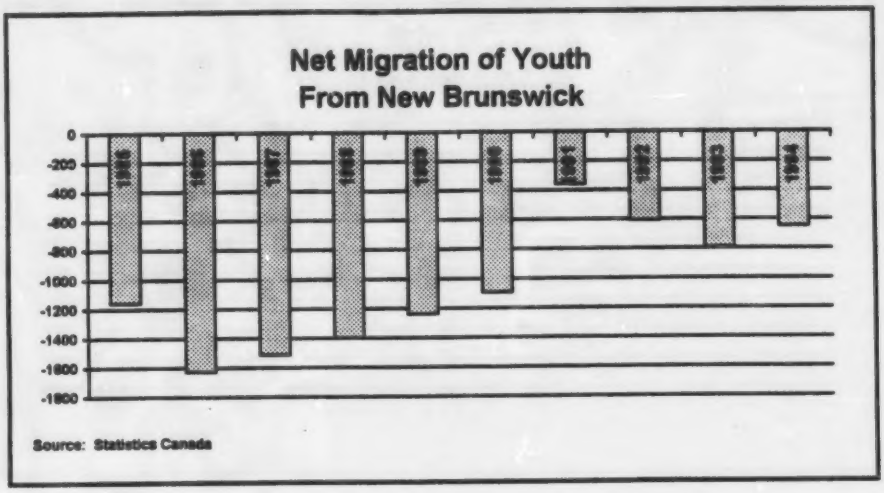
According to the information provided by the New Brunswick Statistics Agency, in 1994, there were 114,700 youth aged 15-24 in the province. The data also indicate that the 20-24 aged group is slighty higher in numbers with 58,900 compare to 55,800 for the 15-19. There are almost equal numbers of male and female youth in the 15-24 age category in New Brunswick, with the males in a slight majority at 51%.

Youth comprise about 15% of New Brunswick's total population of 758,400. Their percentage is shrinking relative to other age groups. This decreasing proportion is due to the decline in the number of youth since 1976, and the net out migration of youth.

The [labour force] participation rate for those between 15 and 24 has fallen even more dramatically, dropping to a 19-year low earlier this year. Instead of exposing themselves to a harsh job market, young people have headed back to school to upgrade their skills. About one-third of those aged 20 to 24 are attending school, compared with one-fifth in 1988.

Nicholas Chamie, Conference Board of Canada

ISSUE 21: INTERPROVINCIAL MIGRATION



Description

Interprovincial migration refers to the number of youth moving to New Brunswick and the number moving away from the province to other parts of Canada. Net migration is the difference between these two numbers.

Analysis

The chart below shows a negative net migration of youth aged 15 to 24 since the year 1985. In other words, there are more youth leaving New Brunswick than there are moving into the province. In this 10 year period, we can see that the highest negative net migration of youth was in 1986 (1628) while the lowest was in 1991 (356). Also, during this period, there are more males than females leaving the province. The only exception to this is in the years 1989 and 1991, where the number of females showing a negative net migration was higher than males. Depending on the years, the difference in the negative net migration between males and females varies between 35 and 210.

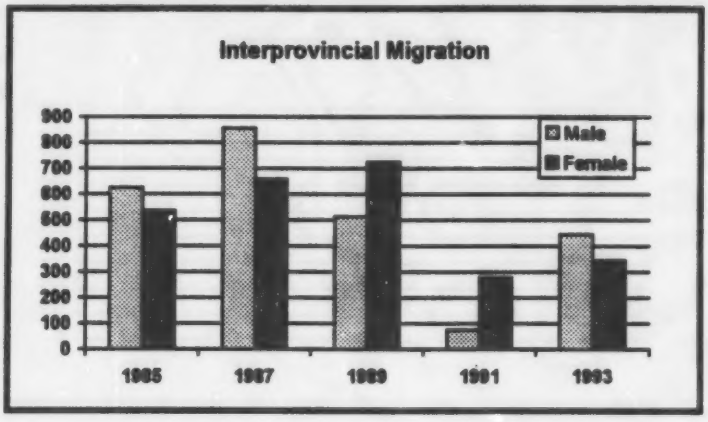
The data gathered since 1985 indicate that amongst the overall population from age 1 to over 90, the largest number of people leaving the province in any given year is the youth aged 15 to 24 years old.

There are several reasons why the youth of this province would be moving to other parts of the country. It is argued that the lack of jobs for youth in New Brunswick and the employment opportunities that exists in other provinces is perhaps the most important reason for leaving. On the other hand, it is difficult to explain clearly why, in 1990, the negative net migration of youth reached almost 1100 while the unemployment rate for youth in New Brunswick was 18.8% and in 1991, the number dropped drastically to 356 while the unemployment rate had increased to 20.4%. This would indicate that the provincial unemployment rate for youth is not as strong an indicator as we may have believed. Other reasons include parents relocating elsewhere in Canada and bringing their family with them, including youth.

The chart also shows that the population drain has been lower the past four years compare to the first six years examined. There are several reasons explaining this decline. First, the youth population has been declining steadily since 1976, so there are simply not as many youth to leave the province as there once were. Secondl, the economies of other provinces like Ontario and Alberta have not experienced the kind of economic growth that occurred during the mid 1980's. Another reason could be related to the recession and the slow down of the economy that we saw at the beginning of the decade which, as a result, increased the number of youth unemployed. This situation has certainly discouraged a number of youth from moving to seek better opportunities. In turn, more youth are staying home for a longer period of time. Finally, another reason could be that the New Brunswick economy in recent years has been growing at a relatively high rate. It could be an indication that youth have more confidence in their prospects for gainful employment at home than in other provinces.

Implication

Today, the youth cohort of 15-24 years of age comprises 19% of New Brunswick's working age population. However, because New Brunswickers are having fewer babies, it is predicted that this cohort will shrink to roughly 14% in fifteen years. We will then have an aging working population, with relatively fewer younger persons actively contributing to the economy of the province. If the negative net migration of youth is not stopped, the number of youth supporting the economy in the future will be even less than currently anticipated.



WOMEN

Two demographic trends referred to in several sections of this document are increases in the number of seniors and increases in the number of single parent families. Women far outnumber men in both groups. The issues raised are related, for the most part, to lack of sufficient income.

In a 1995 Report of the National Council of Welfare, family types were arranged in order of risk of poverty. Single parent mothers, unattached women over 65 and unattached women under 65 were first, second and third in this list, followed by unattached men under 65, unattached men over 65 and then by couples. The family types most apt to be poor are also the family types where increase in numbers is projected.

88% of the wage gap remains unexplained by factors such as differences in work experience, education, or demographic characteristics.

Dynamics Report 1994, Statistics Canada

ISSUE 22: PARTICIPATION RATE OF WOMEN IN THE NEW BRUNSWICK LABOUR FORCE

A major societal change of the last 25 years has been the increased participation of women in the paid labour force. The rapid change means that many women now working will have been caught in the transition without sufficient time and earnings to provide for retirement. The following information on the participation rates and earnings of New Brunswick women working full year full time provides a basis for discussing economic issues facing all women.

The above graph shows the dramatic increase in labour force participation of women aged 25 to 54 over the past two decades. The participation rate of women aged 55 to 64 remained at a low 27% over the 18 year spread in contrast to the increases in the rates for the previous age group. The participation rate for this group for age 55-64 for 1995, however, shows an increase to 29%.[4]

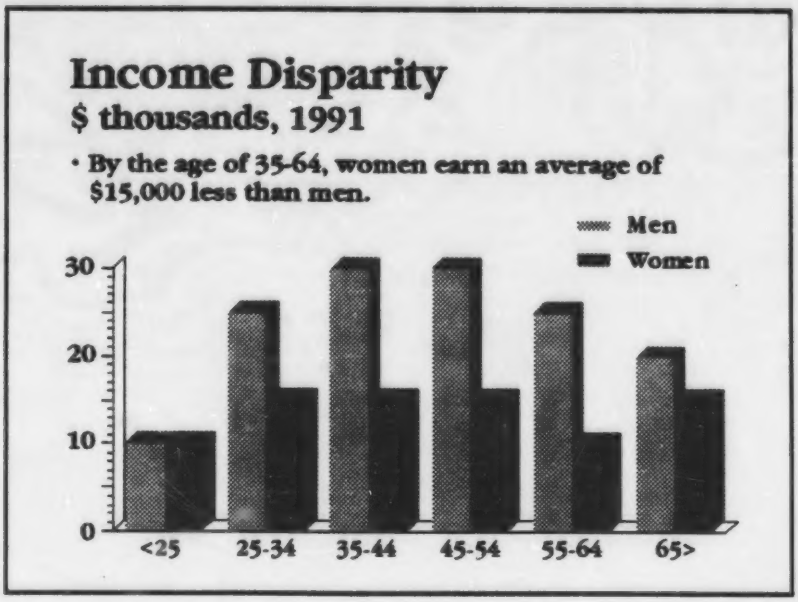
The Table below compares the participation rates of women and men by age group for the year 1995. As we see, the rate for women is still lower than that for men, particularly in the 45 -64 categories.

[4] The participation rate includes all women over the age of 15 who responded positively to the survey question asking if they had worked or been looking for work during the previous week. It includes, for example, self-employed and part-time workers. These figures do not tell us how many of these women are unemployed or underemployed.

Age Group	Males	Females
15-19	45.6	43.2
20-24	75.4	70.4
25-34	85.5	74.5
35-44	85.6	72.0
45-54	81.4	65.2
55-64	49.8	29.2

ISSUE 23: RATE OF RETURN ON WOMEN'S LABOUR FORCE PARTICIPATION

Although the number of women who are in the labour force has increased dramatically in the last 25 years, women on the average continue to earn significantly less than men.



The average earnings of New Brunswick women working full-year full-time are shown as a percentage ratio of the average earnings of New Brunswick men working full year full time. In 22 years there has been no significant change. In 1971, women earned, on the average, 62 cents for every dollar earned by men. In 1994, they earned 64 cents.

Although the wage gap has not narrowed in the Atlantic region, it has in other parts of the country. In Canada, in 1971, women working full-time for the full year earned, on the average, 59.7% of men's earnings. In 1994, women in Canada earned, on the average, 70.0% of men's earnings.

Another measurement which allows for comparisons is to show average wages. The average full-year full-time wages of men and women in the various provinces for 1994 are shown below.

	Male		Female
Ontario	43,777	Ontario	30,482
British Columbia	42,830	British Columbia	29,788
Alberta	39,315	Alberta	27,071
Quebec	38,201	Quebec	26,734
Newfoundland	37,343	Nova Scotia	26,313
New Brunswick	37,052	Newfoundland	25,673
Nova Scotia	36,210	Manitoba	25,278
Saskatchewan	34,682	P.E.I.	24,143
Manitoba	34,317	Saskatchewan	24,046
P.E.I.	31,164	New Brunswick	23,671

The average wage of New Brunswick women working full year full time is $23,671, the lowest of any province. New Brunswick men placed fifth on the average wage list.

SENIORS

Premier Frank McKenna expressed in his document, "New Initiatives of the Government of New Brunswick"(Sept 24, 1993), that the contribution of seniors in New Brunswick is important to the quality of life in our province. However, the premier also recognized that the changing demographic structure of New Brunswick presents special difficulties for seniors as they cope with the challenges of ageing.

In the future it is expected that the senior population in New Brunswick will increase significantly. A dramatic increase in the senior population in New Brunswick will be felt, beyond 2009, when the baby boom generation becomes seniors, roughly between 2016 and 2036. Unlike the population at younger age groups, future change in the senior (65+) population is known with a fair degree of certainty, since persons reaching this age in the projection period have already been born. Not only will this population grow rapidly in number, but also as a proportion of total population. Two factors that contribute to this growth are persistent sub-replacement level of fertility and rising life expectancy levels. Seniors will generally live longer, and the proportion of seniors in the older senior age group (90+) will increase significantly. A greater proportion of seniors 90+ will be women. This is because women have a higher level of life expectancy than men (81.4 yrs vs 74.9yrs). (N.B. Statistics Agency)

Seniors play an integral role in New Brunswick society through their volunteer work and their commitment to their communities. Many seniors play a critical role in caring for family members and friends.

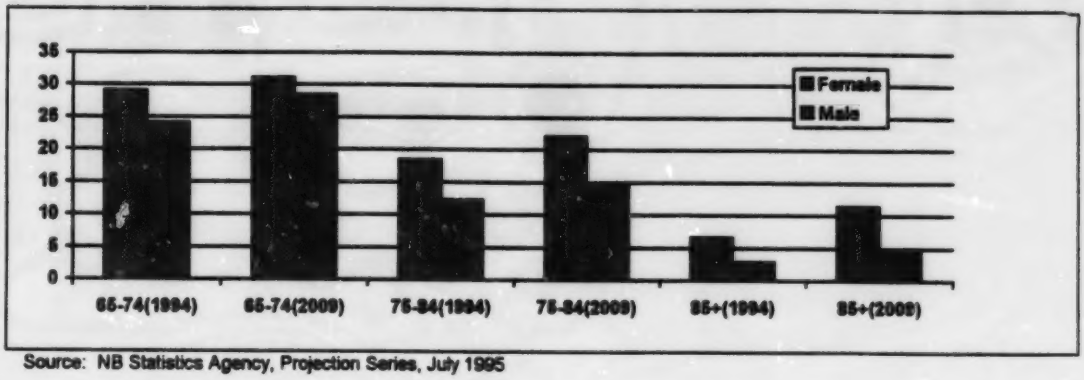
In the future, the New Brunswick senior population will increase, a situation which is expected to prevail for a number of years. The proportion of seniors 85+ will increase significantly and because of higher life expectancy levels among females, this group of seniors will be comprised mainly of women. Some older seniors will be faced with challenges of living alone and coping with physical, emotional, and financial difficulties, while some younger seniors will be more active and able to lead a full life experience.

Getting older is a normal and natural part of living, a process that begins the day we are born. Many factors impact upon our quality of life, of which the issues discussed in this section are only two. Individuals must be considered as a whole person with emotional, physical, mental and spiritual needs. However, as seniors, government and society plan for tomorrow they need to ensure that no aspect be viewed in isolation. The contribution of the senior population is of particular importance to the quality of life of all New Brunswickers. Changing demographics, such as our aging population, present unique challenges as well as opportunities to seniors, government and society as a whole.

***Seniors as a group are not homogeneous. The differences among them in health, marital status, housing, income and ethnicity are as great as they are among younger Canadians. The living situations of older women often differ considerably from men of the same age. As Canadians live longer, this diversity will continue to grow.* (Canada's Seniors - A Dynamic Force)**

ISSUE 24: INCREASE IN THE 65 AND OVER AGE GROUP

FIGURE 2
65+ POPULATION, BY GENDER AND AGE GROUP
N.B. 1994 AND 2009



Source: NB Statistics Agency, Projection Series, July 1995

Description

The number of New Brunswickers age 65 and over is steadily increasing. In 1994, there were 93,500 individuals age 65 and over[5]. These numbers are expected to reach 112,900 by 2009 and 179.3 thousand by 2024[6]. As Figure 2 indicates, the increase will not be uniform amongst the age groups or by gender.

Analysis

New Brunswick's population is aging. Declining birth rates are a major determinant of population ageing because they reduce the proportion of the non-elderly population. Other contributing factors include migration and mortality trends[7].

In 1994, 12.3% of the total population was age 65 and over, and this is expected to increase to 14.2% by 2009 and to approximately 22.6% by 2024.

Between 1994 and 2009, there will be a 20.7% overall increase in the 65 and over population. However, as illustrated in the following table, the increase will not be uniform amongst age groups.

---

[5]N.B. Statistics Agency. (July 1995). *Population Projections, 1994-2009*. Scenario 3.

[6] Population Projections, 1994-2009, prepared by N.B. Statistical Agency were mathematically extended to 2024. This means that they do not take into account changes in fertility, interprovincial migration, and future life expectancy beyond 2009 and thus present major limitations. However, these figures can still be insightful for planners, policy makers and stakeholders interested in the future implications of demographic change.

[7]Statistics Canada. (1994). *Focus on Canada: Profile of Canada's Seniors*. Catalogue Number 96-312E.

The large increase in the 65-74 population will not occur until the Baby Boomers[8] reach that age group.

Though the groups 75-84 and the 85+ will each increase by almost the same amount, the rapid growth of the 85+ age group represents a greater proportional increase, over 70%.

A significant proportion of the population aged 65+ are women and the proportion increases with age (see Figure 2). The difference in population gender is due to the fact that life expectancy at birth for women is higher than for men (81.4 yrs vs 74.9 yrs)[9].

The 1991 Census data indicated that approximately 90% of New Brunswick women age 85+ were unattached (single, widowed or divorced) compared to approximately 49% of New Brunswick men age 85+ [10]. This is a result of the difference in life expectancy combined with the fact that most women tend to marry older men and that unattached older men tend to remarry[11].

Implications

As individuals age, the proportion who have disabilities increases[12]. Of the group age 65 and over, individuals age 85 and over are usually the most frail and therefore have substantial needs in regard to health and social support services (see *Utilization of Health and Support Services by Seniors 85+*).

Most older women are unattached and therefore do not have a spouse as a potential caregiver. This affects their ability to remain in the community, since Census Canada figures (1986) illustrated that individuals who were still married at advanced ages had far below the average (for those ages) rates of residence in institutional facilities. For example, 27.9% of married women age 85 and over were classified as residents of institutions as compared to 43.7% of those never married and 41.4% of the widowed[13].

In 1991, amongst the 65 and over age group in New Brunswick, 76% of household maintainers owned their own homes. Of the renters who were age 65 and over, 65% were women, of whom 55% were age 75 and over[14]. Therefore, as

[8] According to N.B. Statistics, Baby Boomers are the group that was born just after World War II, from 1947 until 1966 (i.e., individuals who in 1995 are between the ages of 29 and 48 are part of the Baby Boom generation).

[9] N.B. Statistics Agency. (July 1995). *Population Statistics, 1994-2009.* Scenario 3.

[10] Statistics Canada. (1992). *Age, Sex and Marital Status.* Catalogue Number 93-310.

[11] Statistics Canada (1993). *Population Ageing and the Elderly: Current Demographic Analysis.* Catalogue Number 91-533.

[12] In 1991, while 7% of New Brunswickrs age 0-14 reported disabilities, this increased to 14.7 for individuals age 15-64 and 53% for individuals age 65 and over. Corresponding Canadian figures are 6.9%, 12.9% and 46.3%. (Statistics Canada (1994) *Selected Characteristics of Persons with Disabilities*, Catalogue Number 82-555)

[13] Stone, L. & Frenken, H. (1988). *Canada's Seniors.* Statistics Canada. Catalogue 98-121.

[14] Statistics Canada. (1992). *Dwellings and Households.* Catalogue Number 93-311.

individuals age, housing choices and modifications to current housing will need to be available to accommodate the changing family structure as well as any decline in physical functioning.

According to Statistics Canada[15], in 1991, 52.3% of all New Brunswickers lived in rural areas. However, of the individuals under age 65, 47% lived in urban areas compared to 55% of the individuals age 65 and over[16]. Amongst the 65 and over age group in New Brunswick, females are more likely than males to live in urban areas.

Individuals living in rural areas often encounter difficulties in regard to accessing needed services unless family members/spouses are available to provide assistance, especially in regard to transportation.

In 1991, of the noninstitutionalized persons age 65 and over, proportionately more lived in families in rural areas (66%) than lived in families in urban areas (58%). Persons who lived alone represented 21% of the rural senior population in comparison to 30% of the urban senior population. Living alone is a risk factor for seniors. Therefore, seniors living in urban areas are more likely to single, female, renting and living alone.

Aging is often accompanied with increased disabilities and decreased mobility. For many it may mean no longer being able to drive. Many older women never learned to drive and the loss of a husband also means the loss of transportation. Though public transport can meet some of the needs, transportation is a major problem, especially in rural areas.

[15]Statistics Canada. (1993). *Profile of Urban and Rural Areas - Part A.* Catalogue No. 93-339.

[16]An urban area is an area which has attained a population concentration of at least 1,000 and a population density of at least 400 per square kilometre, at the previous census.

ISSUE 25: SENIORS - AGING-IN-PLACE

Figure 1

Senior Households in New Brunswick
1991 -2011

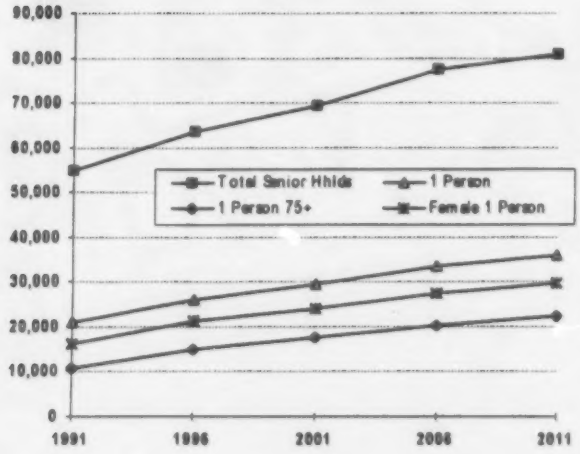
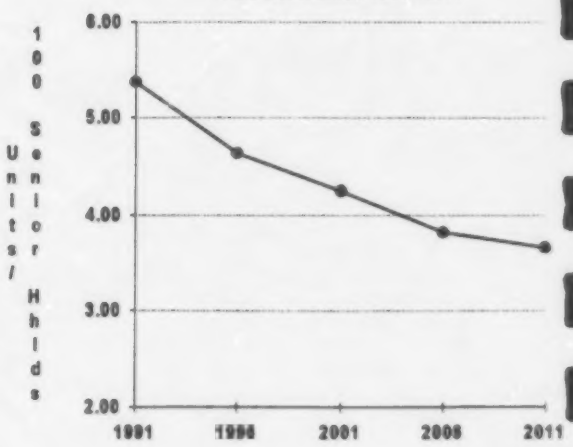


Figure 2

Service Delivery Ratios - Provincially Subsidized Senior Housing Units, New Brunswick 1991 -2011



Description:

The model allows for the projection of the number and type of households to be formed and the tenure choices these households are likely to make. The first Figure above shows projections of the number of senior households by selective type. The second Figure shows the actual and projected number of provincially subsidized senior housing units provided under the Public Housing and Non-Profit Housing programs for every 100 senior households for the period 1991 to 2011.[17]

Analysis:

It is projected that by 2011, senior headed households will increase to approximately 80,000, up 47% over 1991 levels. Senior households could represent 23% of total households. Seniors couple households are projected to increase by 40% while senior *Non-Family* households, those living alone or with others who are not family members, are projected to increase by 70%. Senior females living alone, those who have traditionally experienced the highest levels of housing need within the senior population, could number nearly 30,000. The number of households headed by an elderly senior (75+) living alone could double to in excess of 20,000 households. During the 1971 to 1991 period, the Province established a portfolio of subsidized housing units for low-income seniors. Their accommodation costs are established as a percentage of their household income. No new units of subsidized senior accommodation are currently being provided or anticipated during the projection period, therefore, the number of units available for every 100 senior households will decrease.

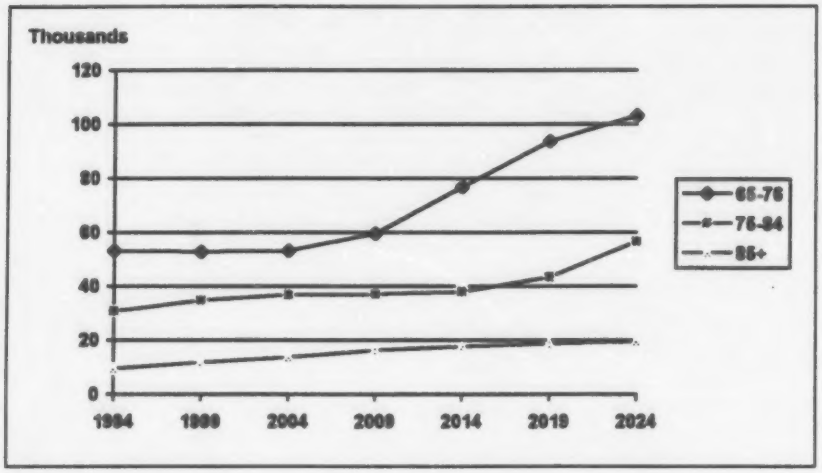
[17] Projections of households, by type and age of head, have been developed using population projections prepared by the Statistics Agency, New Brunswick Department of Finance, and using the Potential Housing Demand Model, Version 1.2 developed by CMHC.

Implications:

The number of seniors is increasing (especially the number of elderly seniors, many of whom are females living alone) and the number of units available for supervised care of seniors is not likely to increase beyond 1996 levels. There will be a need therefore, to broaden formal social support structures and strengthen informal support from family and community in order to ensure that services are available which will enable seniors to age-in-place.

ISSUE 26: MULTIGENERATIONAL CAREGIVER

Figure 1
Number of Individuals Age 65 and Over
N.B. 1994-2024, by Age Group



Description

The ratio of the population aged 75 years and over to the population between the ages of 35 and 64 years[18] provides an indicator of dependency. In addition, the ratio of the population aged 0-14 to the population aged 35-64 provides another indicator of dependency. As Figure 2A shows, the percentage of the elderly relative to the population labelled with double responsibility will increase marginally from 14.6% in 1994 to 15.3% in 2009. Conversely, as Figure 2B shows, the percentage of the child (0-14) population relative to the population labelled with double responsibility will decrease from 54% in 1994 to 37% in 2009. These figures indicate that dependency in New Brunswick is increasing for seniors 75 years and over and decreasing for children (0-14).

Of the total senior population the portion of the seniors aged 75 and over will increase at a much faster rate than any other senior group by the year 2009. The 65-74 group will increase at a rate of 12%, the 75-84 group will increase at a rate of 21% and the 85+ group will increase at a rate of 71%. This 75+ group has been found to be the largest group of service users. Although the child (0-14) population is decreasing, this does not necessarily equate to a decrease in services needed (refer to issue entitled: Socio-demographic factors affecting children).

Analysis

18 The 35-64 age group, commonly known as the "Sandwich Generation", was selected because it is the population most likely to be faced with the double responsibility of meeting the needs of both parents and children. Age 35 years marks the point where there are a significant number of individuals combining both the responsibilities of childcare and eldercare of parents aged 65 and over. As these individuals age, their children reach adulthood and leave home. At the same time, the probability of having a parent 64 years of age or older increases. By the time these individuals, themselves, reach 64 years, this double responsibility is approaching its' end, as there is a high probability that children have moved away and parents have deceased; thus 64 years marks the outer boundary (Statistics Canada, Report on the Demographic Situation in Canada, 1994).

The population with double responsibility (35-64) is forecast to grow by 27% over the fifteen year period, compared to 32.2% for the population 75 years and over. Consequently, as Figure 2A shows, the percentage of the elderly relative to the population labelled with double responsibility will increase from 14.6% in 1994 to 15.3% in 2009.

The increasing labour force participation of women may lead to fewer women available to provide informal care to elderly seniors, if the existing profile of the care-provider, mainly female, continues. This may mean that more pressure may be shifted from informal care-providers to formal care-providers including private purchase. According to the article "Gender Inequalities in Care-giving in Canada" a survey conducted for the Canadian Advisory Council on the Status of Women in the early 1980s, found that 79% of women working part-time outside the home and 73% of women working full-time outside the home , and 75% of women in general carry the majority of health care responsibilities for their families (Statistics Canada, *Health Reports (Cat. 82-003)*: Vol 4, No. 2: 1992). The type of care provided by caregivers is informal and includes such things as: meal preparation, housekeeping, making appointments, transportation, personal care, etc. Alternatively, demands within the nuclear family for care-giving may not change, placing strong pressures on working women. With this increased responsibility, women may still be willing to care for others, however, they may need some support in order to provide the care.

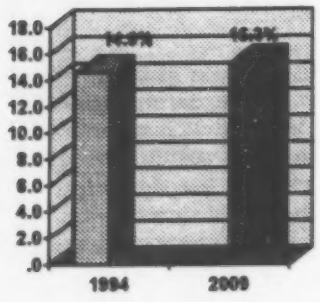
The issue of family members becoming geographically distanced from their extended families may have an effect of shifting more responsibility to the formal system of care for seniors. Poor employment and career prospects in some regions as well as a general desire to live elsewhere may lead to significant regional differences in demographics. These changes in mobility patterns may have different implications for different regions. For example, some regions may have relatively more/less caregivers while others may have more/less seniors, resulting in different needs. Further analysis is required before making any recommendations.

Although the population projections extend only until 2009, one can conclude from the data that, *ceteris paribus*, the real pressure of this increasing aging population may have to be shouldered by care-givers (35-64) and their families. The families, themselves, may have to bear additional responsibilities, because the formal systems of care may not be able to provide additional resources. This societal pressure will increase significantly in roughly 20 years time. At which point, the percentage of population with double responsibility will likely escalate as the baby boom generation undergoes the transition from being care-providers to being those in need of care. As a result, there will be a much smaller care-provider population to care for a much larger elderly population (see figure 2C).

Implications

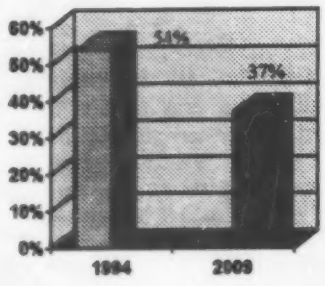
Women have traditionally provided the majority of informal caregiving. Although many women have often juggled a working career with the responsibilities of caregiving, there is a growing concern, especially with the increasing 85+ population, that this current pattern cannot persist without effecting the amount and quality of caregiving, or the long term capacity and the quality of life of the caregiver.

Figure 2A
Percentage of Seniors (75 + yrs.)
to Care-Providers (35-64 yrs.)



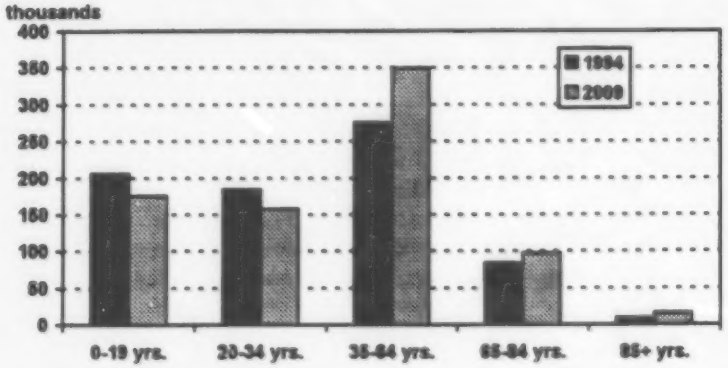
Source: NB Statistics Agency
Projection Series, July, 1995

Figure 2B
Percentage of Children (0-14 yrs.)
to Care-Providers (35-64 yrs.)



Source: NB Statistics Agency
Projection Series, July, 1995

Figure 2C
Population Levels by Age Cohorts



Source: NB Statistics Agency
Projection Series, July, 1995

FAMILIES

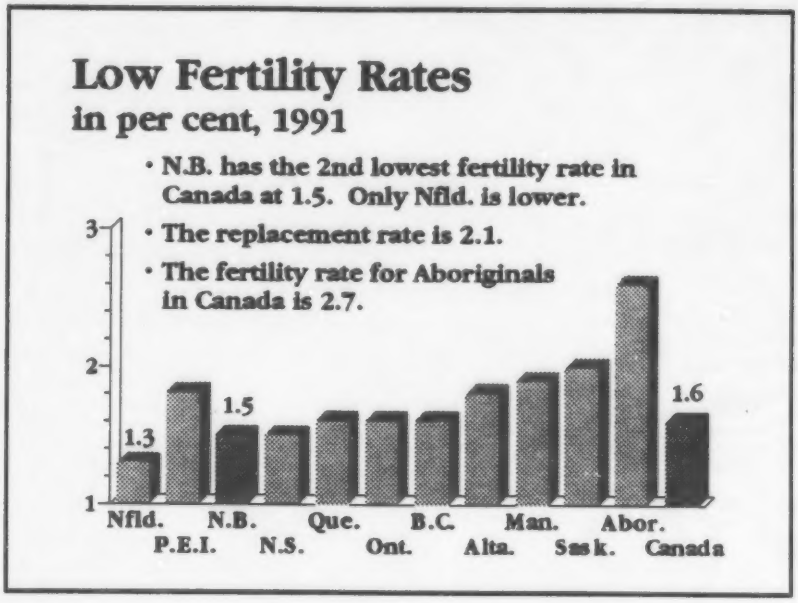
Husband-wife families still make up the largest share (86.5%) of all families in the province. However, the profile of New Brunswick's family is one of growing diversity. The traditional "nuclear" family consisting of husband and wife and never married children is being transformed into a diversity of family forms. For instance, lone parent families, blended families which are an outcome of divorce or in some cases widowed spouses with never married children who remarry, and common-law unions, are on the increase. Also included as a new family form is husband-wife families without children.

In 1994, there were 208,000 families in New Brunswick. It is expected that by 2016 the number of families in NB will increase to 232,700.

Families are getting stronger because in these times of social and economic uncertainty people realize they can't make it on their own.

Rev. Michael Peers, Primate of the Anglican Church

ISSUE 27: CONTINUED LOW FERTILITY



The total fertility rate refers to the average number of children born to a women in her lifetime. A total fertility rate of 2.1 is necessary to maintain the current population level without immigration factored in. However, New Brunswick's current fertility rate stands at 1.55.

One-parent families had fewer children (1.5) than husband-wife families with children (1.8). Moreover, according to Statistics Canada, in 1993, 67.1% of New Brunswick's births were to married women, 31.3% to single women, 1.5% to divorced women and 0.1% to widows.

The consequences of declining birth rates are different for individuals than they are for society. For individuals, having fewer children and delaying childbearing may mean having more time and money to invest in each child and in their own personal development, as well as an increased opportunity to attain a higher standard of living. For society as a whole however, falling birth rates lead to an aging of the population and a shrinking of the labour force. While the overall impact of these changes is unclear, a smaller population may decrease tax revenues and federal transfer payments to New Brunswick. Moreover, a rising proportion of seniors increases demand for income security programs and medical care.

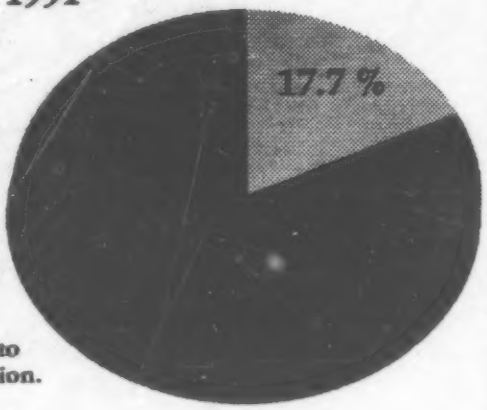
THE DISABLED

In New Brunswick in 1991, there were approximately 69,600 persons over the age of 15 years reporting a disability. In short, 12% of the New Brunswick population 15 years of age and older reported an activity limiting disability. Approximately 52% reported a "mild" disability, 34% reported a "moderate" disability and 14% reported a "severe" disability.

Disabled Persons

% population, 1991

- There were 127,050 persons reporting a disability.
- Many aging citizens are developing health problems which impact on their ability to take care of themselves.
- Unemployment remains high for this group, relative to the general population.



People with disabilities are poor. One survey found that 63 per cent of people who have a disability have an annual income of less than $10,000. Only five per cent have an annual income of more than $30,000. These numbers demand that we ask why people with disabilities are living under these conditions. One obvious answer is that they do not have jobs. Many are not even in the labour force. If people with disabilities were participating at the same rate as everyone else, more than half a million people with disabilities would move into the labour market.

Francine Arsenault, Council of Canadians with Disabilities

ISSUE 28: UNEMPLOYMENT RATE AMONG DISABLED PERSONS

The rate of employment placements for persons with disabilities remains very low relative to the general population. The unemployment rate in New Brunswick presently stands at 11.5%, and at the time of the 1991 census, the unemployment rate for disabled people stood at 16%. This has created a situation where many persons with disabilities have low incomes and little control over their circumstances. Therefore, there is a need to tap into this under utilized labour pool. It will not only help maintain a reasonable tax base when many of our baby boomers start retiring, but it will also increase their purchasing power, thus serve to stimulate the economic activity in the province.

ISSUE 29: EDUCATIONAL ATTAINMENT OF PERSONS WITH DISABILITIES

More and more persons with disabilities are obtaining an education through inclusion in the public school system, however they are still not reaching and completing post-secondary education levels. Persons with "milder" disabilities report the highest levels of educational attainment while those who fall into the "moderate" and "severe" categories have the lowest educational attainment; 43% reported having no formal schooling or less than nine years of schooling.

Post-secondary educational institutions must be encouraged to develop more effective barrier-free access and support systems to increase the rate of participation by students with disabilities. There will be a growing market of such students who need training and a growing market to place such qualified students upon completion of training.

URBAN/RURAL

The general definition describing "rural" used by Statistics Canada classifies a settlement of a population of 1,000 as "urban" and remaining communities with a population of less than 1000 as 'rural'. However, it is important to note that many rural areas in New Brunswick are in close proximity to large urban centers, therefore are less affected by constraints of distance as that of the more remote hinterland. In short, Statistics Canada's definition of rural is based on population density, thus does not consider where the rural area is located in proximity to urban centers.

More than half of New Brunswickers (52.3%) live in rural areas. This is a remarkably high proportion in a country where, nationally, only 23.4% of people live in rural areas. The 1991 census reported that 378,690 people lived in rural New Brunswick compared to 345,215 in urban areas. New Brunswick is one of only three provinces in which rural growth exceeded urban expansion between 1981 and 1991.

Correspondingly, population distribution in New Brunswick is tremendously scattered, with people residing in cities, towns, villages and parishes all over the province. This has significant implications in terms of provision of government service delivery to these more remote communities.

Over the past few decades, technological advances in transportation and communication have contributed to a growing similarity between rural and urban lifestyles. Television, radio and satellite transmissions, now available in remote areas, provide common cultural experiences. Moreover, improved transportation networks lessen the physical isolation felt by rural residents.

The perceived benefits of the rural lifestyle have attracted many New Brunswickers to live in the non-incorporated areas (outside our cities, towns and villages). In 1991, Statistics Canada figures indicated that approximately 40 percent (288,190) of all New Brunswickers live in non-incorporated areas. This has increased from 36 percent in 1976 and the trend to increasing non-incorporated population is consistent across every county in the Province.

Commission on Land Use and the Rural Environment, April 1993

ISSUE 30: SETTLEMENT PATTERNS AND SERVICE PROVISION IN RURAL AREAS

Figure 3

Urban/Rural Population Characteristics, 1971-1991

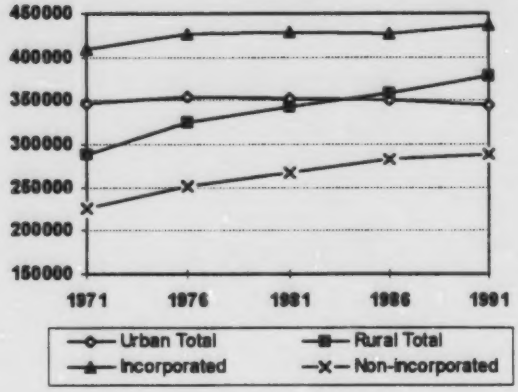


Figure 4

NB Total Households, and Population by Age Groups, 1991 - 2011

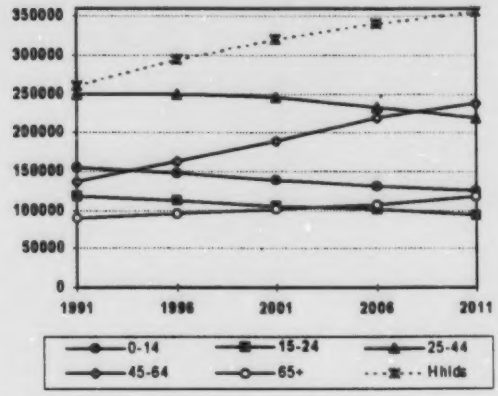


Figure 5

Households by Age Group by Community Size, NB 1991

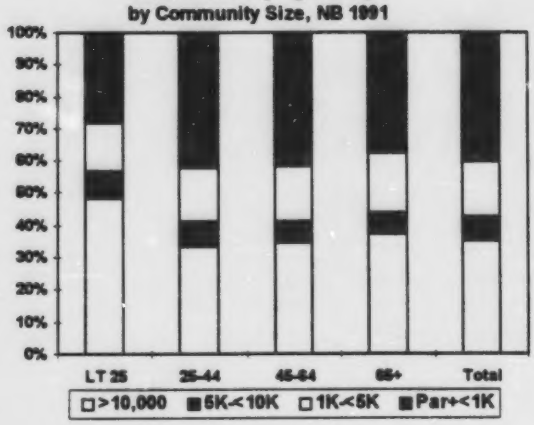
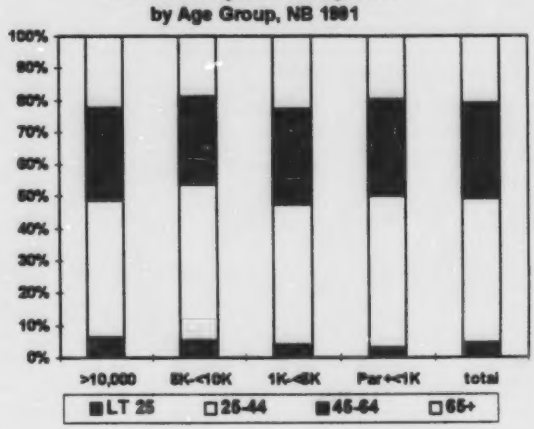


Figure 6

Household by Community Size, by Age Group, NB 1991



Description:

Figure 1 above shows the rates of growth of "rural" and "urban" population distributions as well as "incorporated" and "unincorporated" areas for the 1971 to 1991 period. Figure 2 shows the projected population growth, by age group, for the period 1991 to 2011. Figure 3 illustrates the percentage of households within each age group which live in each of the four community types. Figure 4 shows similar information but examines the data from the perspective of the size of the community - that is, within each community size category, how the households are distributed by age group.

Analysis:

Unlike the rest of Canada, rural areas of New Brunswick have been gaining population at a faster rate than urban areas. Similarly, non-incorporated areas have been growing at a faster rate than incorporated areas. Although no projections of population were undertaken for rural and urban areas of the province, some guesstimates can be made about growth patterns in these areas. It is anticipated that limited population and household growth will continue in rural areas until the turn of the century.

At that time an actual decline is anticipated in the number of *Family* household heads aged 25-44, those who have been largely responsible for the growth of urban sprawl in rural and non-incorporated areas around the larger municipalities. Although it is anticipated there will be limited growth in this age group in the *Non-Family* household category throughout the projection period, this group accounted for only 17% of total 25-44 year old households in 1991. Additionally, *Non-Family* households within this age group tend to be more highly concentrated in urban areas given the nature of the households - young to middle aged single persons or doubled-up arrangements where no "family" or common-law ties exist.

When 1991 households are examined on the basis of the age of the household by community size, it is evident that, with the exception of the youngest households, few differences between the locational distributions of the age groups are evident. However, a much higher percentage of the "less than 25" category were located in the largest community size group - those with 10,000+ population, and considerably fewer of them were found in the most rural areas - rural parishes and communities of less than 1,000 population. When the locational choices of seniors are compared to those of the total population, only slight variances are noticeable. Slightly higher percentages of seniors live in cities and communities with population levels of 1,000 to 5,000 than the rest of the population, while slightly lower percentages of seniors live in communities with population levels between 5,000 and 10,000 or in the most rural areas of the province.

From another perspective, in 1991, communities with population levels between 5,000 and 10,000 and the rural parishes and communities with less than 1,000 population had higher percentages of their households with the head of the household aged 25-44 than did other areas of the province. The cities and those municipalities with population levels between 1,000 and 5,000 had slightly higher percentages of total households which were headed by a senior than did the other two community categories.

Implications:

Urban sprawl and the non- controlled growth of settlement in rural areas has created significant pressures on resources and the natural environment. The CLURE report outlined how unplanned and unregulated growth of residential, commercial, and industrial uses has produced conflicts in unincorporated areas. The report also indicated that serious threats and pressures have developed on such resources as drinking water, coastlines, and sensitive natural areas. CLURE suggested that this pattern of unregulated settlement and development has undermined the growth and tax bases of municipalities, resulting in increasing costs to these taxpayers for the provision of such basic services as police, fire, ambulance, water and sewerage services. Similarly, there have been cost pressures imposed on the Province to provide basic services in unincorporated areas.[19] Government is taking steps to implement the recommendations of the Commission which relate to urban sprawl and ribbon development.

The possibility that the rate of residential growth in urban fringe and rural areas is anticipated to slow and may not continue at the same rate as in the past should ease the pressure somewhat until solutions are found and put in place to alleviate the problems associated with non-controlled residential growth. The rate of growth of households in the 25-44 year age group, that age cohort which was responsible for the bulk of the growth of "bedroom communities", is anticipated to slow

[19] Government Response to the Final Report of the Commission on Land Use and the Rural Environment, November 1993, p. 6

dramatically during the projection period. It is also unlikely that there will be any appreciable migration of middle and older households to more urban centres.

Those currently resident in rural areas are likely to remain and "age in place" in their existing dwelling for as long as their health allows. This "aging of the population" in rural areas, as in all other areas of the province, will result in additional pressure on the community and the other levels of government to provide support services for the elderly. Although the concentration of elderly households does not seem inordinately high in rural areas compared to other areas of the province, it is recognized that elderly households do not have access to the variety of established service delivery systems in rural area as those seniors which live in more highly urbanized communities. Housing and other services for those who require some form of assistance to maintain independence are limited in rural areas. As the size of the elderly population increases, especially the frail elderly, demand for support programs will increase. Thus, coping with the aging process in a rural community could prove to be more difficult than in a more urbanized setting. However, it should be noted that the amount of support that is provided to seniors by neighbours, friends and family in rural areas is considerable.

Average household incomes in rural areas have traditionally been lower than those in more urbanized localities. The average income of rural elderly homeowners are substantively below those of their urban counterparts. Many of these homeowners are women (approximately 30% in 1991). Although rural incomes are considerably lower, the percentage of rural senior homeowners experiencing shelter affordability problems is less than that of seniors in urban areas. This is due to the fact that homeowners in rural areas have lower shelter costs, due in part to lower property tax rates and other factors such as access to low cost fuel from woodlots, lower land costs, acceptability of more modest designs, including manufactured housing options, of staged-built housing, etc.

ISSUE 31: THE CHANGING FACE OF URBAN MUNICIPALITIES

Figure 7

NB Total Households, and Population by Age Groups, 1991 - 2011

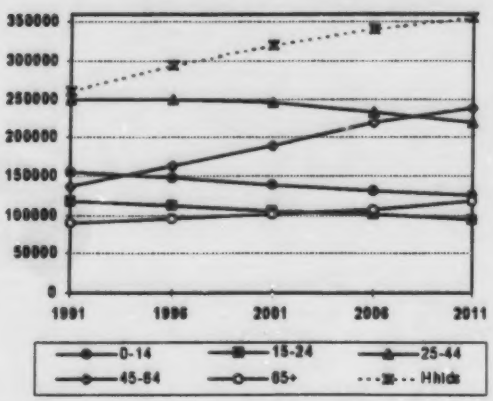
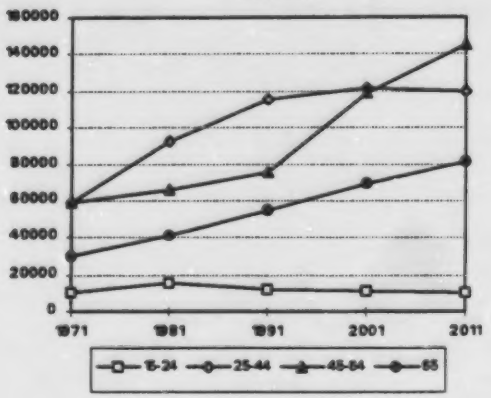


Figure 8

NB Households by Age Group 1971 - 2011



Description:

Figure 1 shows the projected distribution of the population by age group to the year 2011. Figure 2. shows the projected number of households by age of the head of the household to the year 2011.[20]

Analysis:

The rate of overall household growth is anticipated to be slower during the projection period than during the 1971 to 1991 period. Growth in the number of households in the 25-44 year age group will be negligible over the projection period. This will have a direct impact on the demand for those specific services which municipalities have been asked to supply to this age group over the past two decades. The number of households with the head aged 45-64, however, will increase as the baby boomers mature. By 2011, the bulk of the baby boomers will be in the 50 to 65 year age range and, as has been the case throughout their lives, will be exercising substantial control over the type of services demanded of the urban municipalities in which they live.

Implications:

The aging of the population will require a rethinking of municipal service offerings and infrastructure requirements. In the past, the growth of the baby boom generation led to a straining of municipal resources, both physical and financial, and resulted in rapid growth in infrastructure requirements to support the demands of this population bulge. Between 1995 and 2011, the "pre-senior" baby boomers will be demanding quality services which will be somewhat different from those which they required in their younger and middle years.

In the area of the provision of municipal services and infrastructure for recreational purposes, there will likely be a shift in focus from large, indoor, sport specific facilities to outdoor and home-based recreational and leisure activities. Although the baby boomers will be more active than

[20] As projected by the Department of Municipalities, Culture and Housing using the CMHC Potential Housing Demand Model, Version 1.2

previous "middlers", they are expected to choose less aggressive and less competitive pursuits than when they were younger. The aging of the population and the desire of a maturing population to "cocoon" will lead to increased growth in those activities which can be comfortably undertaken in the home.

The pressure to construct large sport specific facilities such as squash courts, competitive swimming pools, new hockey arenas and gymnasiums will diminish as less and less of the population actually engages in such activities, unless they are multi-use facilities which allow for the presentation of spectator sports in comfortable surroundings, or provide opportunities for more sedentary activity such as indoor walking, elder aerobics, elder swim, etc. However, it should be noted that these aging "baby boomers" and the elderly will likely still demand the continuation of the delivery of such sport related services for their grandchildren. There could also be increased pressure to improve existing facilities to accommodate their "spectator" requirements.

There is a strong possibility that a portion of elderly and the middle aged households whose children have left the nest will convert empty bedroom space to leisure and recreational areas. It should also be noted that the economic outlook for younger households is not as buoyant as in previous decades. They are likely to be faced with increased pressures on their disposable income and will, therefore, need to be selective in the choices they make for recreation and leisure purposes. This could result in choices which are similar to those being made by their older neighbours - cheaper, more environmentally friendly, less consumptive activities which do not require large outlays of resources in order to participate.

The municipal infrastructure needs of the aging baby boomers for entertainment and recreation are more likely to fall into the "cultural" spectrum than into the competitive sport area. There is a growing trend among the population towards increased consumption of cultural related products, including television viewing, listening to music, reading, and using libraries, and a growing interest in such activities as festivals, attending museums, live theatre, etc. among the older generations. There will likely be an increased demand for greater consolidation and the ease of access to leisure facilities and services. For example, consumers could expect municipalities to fund libraries which serve as "information centres" providing access to world wide information bases and greater support to lifelong learning endeavours, as well as cultural and social centres.

There will be pressure to improve transportation systems appropriate to the needs of the elderly - comfortable, accommodating, and designed for greater ease of access. Although 87% of senior couples now own a car, a large number of senior females do not drive and they, in addition to the frailer elderly, rely in larger numbers on other forms of transportation - taxis, buses, family and friends. Current mass transit systems will not likely suffice.

Given the increased awareness among the current population of the benefits of physical activity on continued good health, and the elevated level of concern for the environment, pressure will be applied to maintain and protect green spaces, walking trails, etc., within the community or its immediate vicinity.

Seniors are more concerned with safety and security and this level of concern increases sharply as they age. Demands will be placed on municipal governments to improve police and fire protection services, to provide adequate street lighting and other related services such as improved snow removal/sidewalk clearance services, etc.

Older seniors will probably no longer appreciate the "mall shopping" approach to addressing their retail needs to the extent they did in their busy middle years. This may result in greater use of tele-shopping facilities, re-emergence of corner/convenience stores, at-home service delivery for dry-cleaning, grocery, and other goods and services as well as in-home provision of such things as beautician services, physiotherapy, podiatry, etc. Zoning regulations may require adjustment to accommodate such developments.

There is potential that a portion of senior homeowners may wish to downsize their accommodation because of health and accessibility reasons, because of affordability problems, or because they need to realize the equity in their home to fund their retirement. It should be noted that the largest impact of seniors wishing to downsize their dwelling will probably not be felt until after 2011 when the baby boomers reach the senior category.

However, consideration may need to be given to zoning regulations which would allow for subdivision of larger homes, the development of granny suites, etc., to accommodate the housing requirements of the elderly. If a large number of seniors or near seniors elect to downsize through the sale of their dwelling, market imbalances could occur which could lead to depressed values for owned units. This could have a negative impact on residential assessments and subsequently, on the revenue generating capacity of municipalities.

Increased demand for senior support services will also be forthcoming as this large group of individuals nears the 65 plus age cohort. They will, however, also be available to expand the ranks of the volunteer sector and, thus supply a large portion of the human resource requirements associated with the provision of increased services to the elderly.

PERSONAL FINANCES AND THE ECONOMY

Although New Brunswick has fared better than any other Atlantic province, according to Statistics Canada, New Brunswickers, as did other Canadians, saw a decrease in their real family incomes in 1993 over the previous year. Lone-parent families (almost 90% of which are headed by women) took the biggest hit. When inflation is considered, this downward trend has taken place since 1990. Furthermore, Canada's household debt load rose from 82% of after-tax income in 1992 to 90% in 1995. This has serious implications for the Canadian and New Brunswick economies.

With the rapid growth in the senior population that is expected over the next two or three decades and the questions being raised about the future viability of government sponsored retirement programs, the extent to which current workers are making private provisions for retirement could become a critical issue. While increasing numbers of Canadians are taking advantage of tax incentives for retirement savings, there is still a substantial portion of the general population which is not yet making financial provisions for retirement.

The bigger story is the way our standard of living is stalled out. There haven't been any real gains for a long, long time now.

Robert Mansell, Univ. of Calgary

Traditionally, the New Brunswick economy has performed close to national rates. Similar to the Canadian economy, the province is largely dependent on external economic activity, especially in the United States which is the destination of about two-thirds of our foreign shipments.

ISSUE 32: SLOW WAGE GROWTH, DEPLETED SAVINGS AND RISING PERSONAL DEBT

Wage and salary growth from increased employment and collective bargaining settlements will be slower than in the last several decades. Real personal income per person will likely average about a 1.5% increase between 1995-2010, compared to the over 4% of the 1960's and 1970's and 2.9% of the 1980's.

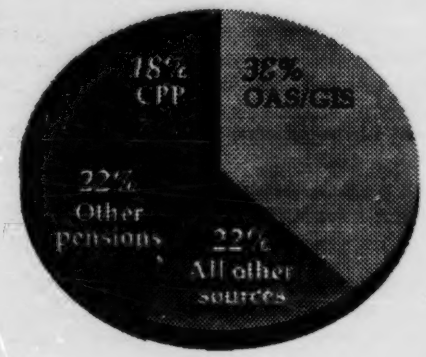
Savings in NB totaled just $534 million in 1994, a drop of 35% from 1993. Savings were not even 5% of disposable income, which was the lowest level recorded since 1980.

New Brunswick residents owed $4.7 billion in 1994. This was the highest level in recent years and represented 90% of disposable income. This makes it very difficult for consumers to fuel the fragile economic growth of the post-recessionary period we are currently experiencing.

ISSUE 33: SOURCE OF RETIREMENT INCOME

Sources of Retirement Income 1993 percent

- **Current retirees are heavily dependent on government and sponsored plans, this is greater for low income seniors;**
- **In 1993, CPP benefits were paid to 77% of all seniors, up from 47% ten years earlier.**



The average income of individuals aged 65 and over has improved considerably since the early 1970's. However, it still remains well below the levels for the population between the ages of 25 and 64.

Current retirees are heavily dependent upon government administered and sponsored plans as sources of income. About 38% of all income received by seniors in New Brunswick is derived from OAS/GIS benefits, with another 18% from CPP payments. Other pension plans provide 22% and the remaining portion comes from other sources. This dependence is substantially greater for low income seniors. Close to three-quarters of all income received by Canadian seniors having 1993 income of less than $20,000 was derived from the OAS/GIS and CPP programs. The CPP has been increasing rapidly in importance. In 1993, CPP benefits were paid to 77% of all seniors in the province, up from 47% ten years earlier.

Women are particularly vulnerable, since when they reach retirement age they have access to lower incomes than men do. Many women in the past did not have a paid working career, and those who did tended to have low wages thus reaping significantly lower benefits when they retire. Therefore, because most women on average live longer than men and are more likely to live alone for an extended time period, they are more likely to have difficulty meeting costs for basic needs (housing, homecare services, transportation, prescriptions, etc.). This often results in a greater level of dependency to meet basic needs.

ISSUE 34: RETIREMENT PENSION CONSIDERATIONS

There are about 115,000 members of pension plans in the province, up only 6% since 1984. Over this same period employment increased 20%, thus pension coverage of workers has fallen in relative terms (as it did nationally) to 41% of total employment. About 55% of these members are employed in the public sector.

Participation in Registered Retirement Savings Plans has increased dramatically, more than doubling over the past ten years to 98,000 in 1994. In 1993, there were 163,000 residents of New Brunswick who received tax credits for contributions to a Registered Pension Plan and/or a RRSP. This compares to a total of 341,000 persons who had some employment income that year. The province's participation rate in these savings plans is about 82% of the national average.

The proportion of taxfilers making contributions to RPPs and RRSPs rises steadily with income. There is almost no participation among low income earners, while over 75% of all provincial returns with over $100,000 in income invested in RRSPs.

There also exists considerable variation in the degree and composition of retirement planning by occupation. About 54% of all taxfilers are classed as employees. Among employees of government, there is a high coverage by pension plans (74%), followed by institutions (51%). RRSP participation has been encouraged by the 1991 tax changes and 31% of government employees had tax credits in 1992 for RRSP contributions. Business employees were covered by RPPs only to the extent of 19%, and 27% participation in RRSPs. For other occupation groups, CPP participation is high among several (the self-employed, farmers, fishers and business proprietors), but RPPs are almost non-existent. Somewhat more than half of all self-employed taxfilers contributed to RRSPs.

Among the various age groups, participation in retirement savings was somewhat higher for the 45-54 age class than for the total population. This can be related both to income levels and the nearing of retirement age. Participation rates fade off in both directions.

It is thus clear that large numbers of New Brunswickers are making some provision for their impending retirement. It is also clear that substantial numbers are not, whether from the lack of income to do so, or based upon the expectation that government plans will be sufficient.

ISSUE 35: SLOW BUT STEADY ECONOMIC GROWTH

In New Brunswick, real growth in the economy will be lower than for Canada, but increased demand for food, forest, mineral and related manufactured products and telecommunication and business services will lead the economy. The overall contribution of the public sector in the economy is likely to be lessened given government downsizing and cuts to federal transfer payments. Population growth will be slower than in the last two decades, but progress should continue to be made on lowering the unemployment rate towards the national average.

Real growth in the New Brunswick economy is projected to average about 2.5% per year to the end of the century. This rate of growth will slow to 2.0% per year over the period from 2000 to 2010.

It is interesting to note the shifts in employment that have occurred in various sectors, particularly as they affect our rural economy. In 1911 for instance, the largest employer in

New Brunswick was the agricultural sector employing 38.3% of the labour force. Fishing and forestry-related employment made up 6.0% of the labour force. In 1991, agriculture-related employment made up only 2.1% of the labour force while fishing and forestry jobs saw a less dramatic decrease to 3.2% of the labour force. Conversely, the service producing industries saw a 45.7% increase in the 1976-1995 period.

RECREATION AND LEISURE

Members of the Baby Boom generation have had a major influence on our economy and our society at each of their life-cycle stages. It is safe to say that they will continue to exert such influence throughout their remaining years. In 1971, the "boomers" were between the ages of 5 and 24 years; by 1991, they were in the 25 to 44 year age group and, by 2011, the majority of the baby boomers will be between the ages of 45 and 64. Their preferences and expectations will dominate overall demand for services in the area of leisure, sport, recreation and cultural activities.

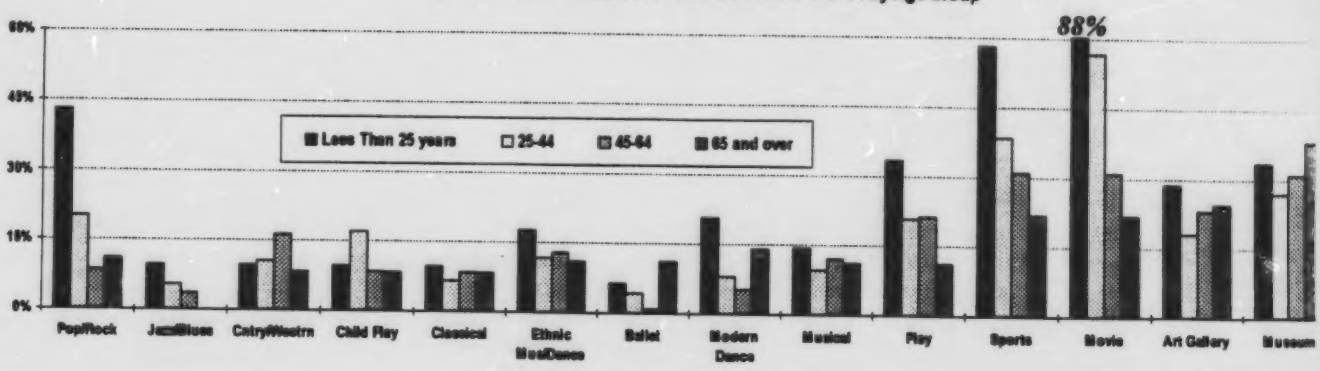
Service provision will need to shift from a concentration on addressing the needs and desires of youth and young adults to greater consideration of the requirements of an older population.

By 2041, people over 55 will have 45% of all the country's leisure time, time they will spend on organizations (such as churches and charities), social occasions, sports and hobbies, communication (such as letter writing and the telephone), TV and radio, and reading.
John Kettle, Future Letter, June 1995

ISSUE 36: SHIFTING DEMAND FOR CULTURAL, SPORT, RECREATIONAL AND LEISURE SERVICES

Figure 1

New Brunswick Attendance at Cultural Events in 1990-91 by Age Group



Analysis:

Interest in cultural activities such as visiting museums, art galleries, live theatre including musicals and plays, ballet, symphonies, etc., increase with age. Older people also prefer individual, non-structured, and less strenuous activities than they did in their youth. Given the projected aging of the population as the baby boom generation moves into the 45-64 year age group, growth in the participation rates of various activities will shift to reflect the interests of this older population.

Implications:

It is anticipated that the population in the "45-64" and "65 plus" age groups will increase by 91% and 47%, respectively during the 1991 to 2011 period. There is an expectation of an increase in the patronage of cultural institutions that have historically been of interest to the individuals in these age categories. The areas that may be positively impacted include increased attendance at Art Galleries, Museums - both traditional and living, and dance theatre such as Ballet and Modern Dance. There will be an increased demand for improved access to "information" resources which should prove challenging for libraries and other information based service industries. Other areas may experience slower growth as a result of demographic shifts - for example, live rock concerts, movies, and sporting events. Areas that may have negative impacts from demographic shifts include decreased interest in live rock concerts, movies and sporting events. An increase in interest in heritage issues may also be forthcoming as the baby-boomers acquire more leisure time. The increase in attention paid to areas of culture will provide both opportunities and challenges for Arts and Heritage sectors of New Brunswick.

[21] The data depicted in Figure 1 was obtained from the Canadian Arts Consumer Profile Study conducted in 1991 by a partnership of private and public groups, including the Department of Municipalities, Culture and Housing.

There will be a shift in participation levels from organized active sport, recreation and leisure activities to less structured, more passive pursuits. *Leisure Watch Canada* has suggested that the whole concept of involvement in team sports and similarly structured activities is being questioned. "The cost of providing specialized facilities for each popular sport will be suspect as restraint continues and the percentage of the community actually involved decreases. Moreover, the accident rates and resultant health costs of sports such as football and hockey are becoming less acceptable to parents, participants and the general public in a climate that increasingly emphasizes prevention rather than rehabilitation."[22]

Ecotourism is one of the fastest growing industries of the '90s and is attracting many visitors to Canada. It is suggested that outdoor recreation is the fastest growing domestic recreation markets.[23] Given the increased awareness among the current population of the benefits of physical activity on continued good health, and the elevated level of concern for the environment, pressure will be applied to maintain and protect green spaces, walking trails, etc., within the community or its immediate vicinity.

There will be increased growth in those activities which can be comfortably undertaken in the home. With regard to the provision of services and infrastructure for recreational purposes, there will likely be a shift in focus from large, indoor, sport specific facilities to outdoor and home-based recreational and leisure activities which do not require the same level of publicly funded infrastructure expenditures. The pressure to construct large, sport specific facilities such as squash courts, competitive swimming pools, new hockey arenas and gymnasiums will diminish as less and less of the population actually engages in such activities, unless they are multi-use facilities which allow for the presentation of spectator sports in comfortable surroundings, or provide opportunities for more sedentary activity such as indoor walking, elder aerobics, elder swim, etc.

It should also be noted that the economic outlook for younger households is not as buoyant as in previous decades. They are likely to be faced with increased pressures on their disposable income and will, therefore, need to be selective in the choices they make for recreation and leisure purposes. This could result in choices which are similar to those being made by their older neighbours - cheaper, more environmentally friendly, less consumptive activities which do not require large outlays of resources in order to participate.

[22] *Leisure Watch Canada*, Vol. 3, No. 4, 1994.
[23] *Leisure Watch Canada*, Vol. 3, No. 4, 1994.

Figure 2

OLAPS Results

Projected Growth Rates in Participation/Activity Levels to 2011

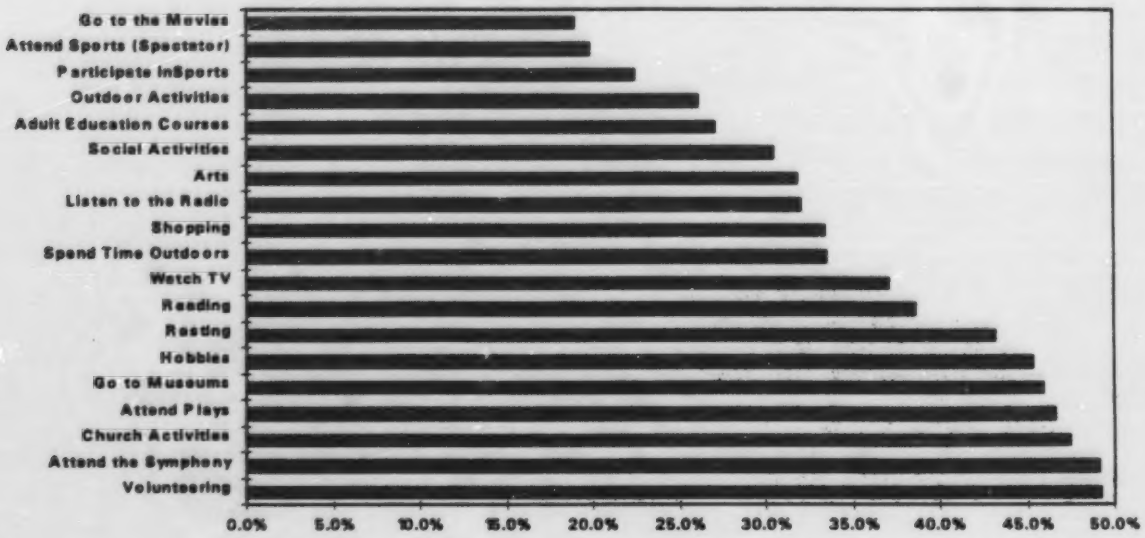


Figure 3

OLAPS Results

Projected Growth in Participation in Sports or Related Activity to 2011

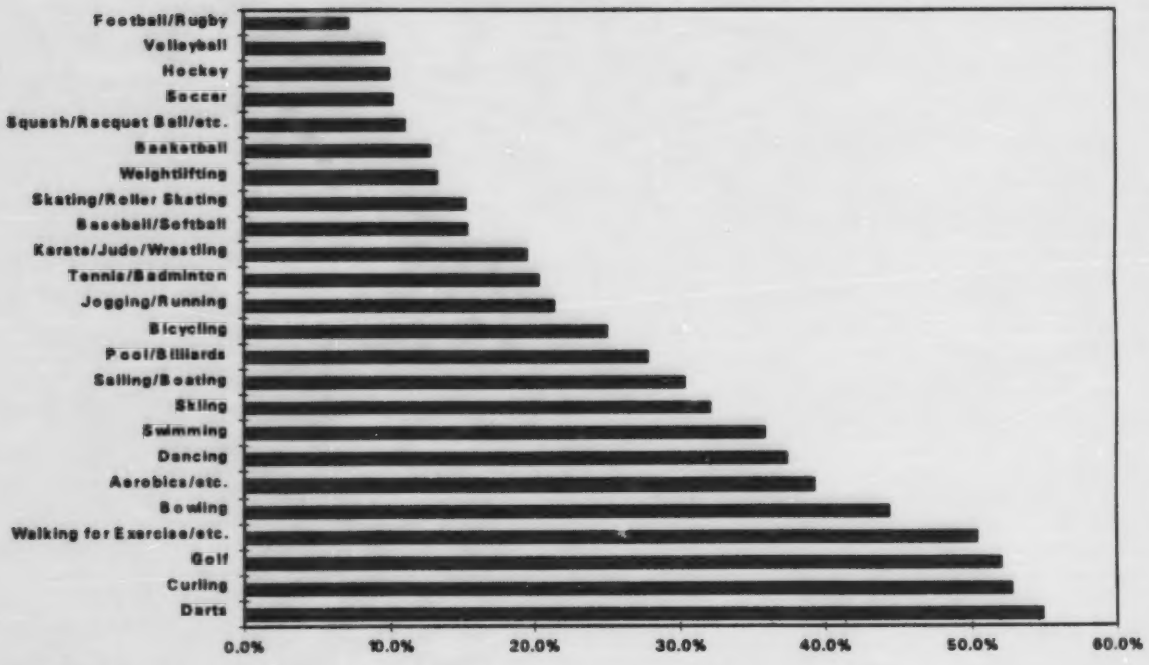
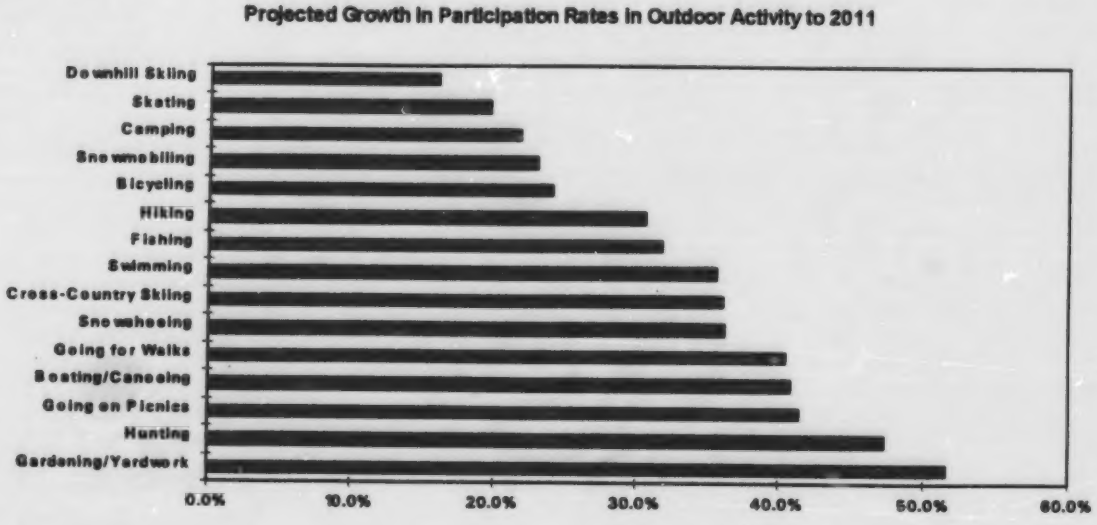


Figure 4

OLAPS Results



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[24] The information shown in Figures 2, 3, and 4 are from the OLAPS survey, a study of leisure activity participation rates in the province of Ontario.

JUSTICE

New Brunswickers have an interest in a safe and secure environment, free from crime. Whether personally accused of a crime, convicted of crimes, victimized by crime, or their friends and family, we want to be treated fairly. The system must be accessible, capable of addressing our needs, must reflect the changing composition of New Brunswick society.

Are the shifts in population demographics which have occurred in the past decade, and projected into the next, predictors of the level and type of crime we can expect over the next 15+ years? Four indicators of resource and program requirements are presented to discuss these past and projected demographic changes: (1) crime rates (2) the types of crimes committed (3) accused/offender characteristics and (4) victim characteristics.

Demographic factors such as age and gender have some influence on crime levels. Statistics Canada reviewed crime patterns, age structures and unemployment levels for the period 1962 to 1990. They found that male youths and young adult males are more criminally active than other age/gender-specific groups.

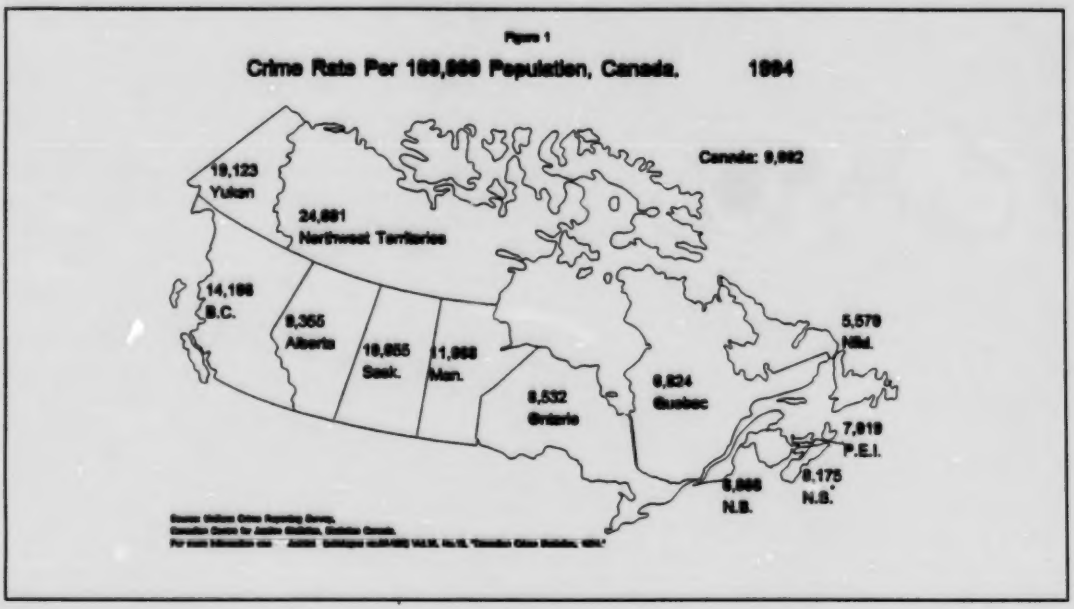
> *Results showed that indeed crime levels were moderately associated with the proportion of the population aged 15 to 30. As this group increased in size, crime rates rose accordingly. Changes in the crime rate may be partially explained by the changing demographic structure of Canadian society. The percentage of the population in the high-crime age groups increased between the 1960s and the 1970s and declined during the 1980s. Violent crime appears to be less tied to age distribution as this type of crime saw a notable increase in the 1960s, a smaller increase in the 1970s and an increased rate of growth in the 1980s.*
>
> *With respect to unemployment, property crime and, to a lesser extent, violent crime was found to increase as the proportion of persons looking for work increased. However, this pattern was not constant across the three decades. During the early 1960s, the unemployment rate declined while the reported crime rate experienced very large increases. This trend changed during the late 1960s and the 1970s, with unemployment and crime increasing hand-in-hand. During the 1980s, crime increased marginally, while the unemployment rate fluctuated.*
>
> *When unemployment rates were compared with crime rates across Canadian justice administration areas for 1986, some connection was found, particularly between male unemployment and crime. In general, these results suggest that during economically difficult times, particularly times of unemployment, law*

New Brunswick differs from other provicnes because of the rural setting. There are no drive-by shootings or gang wars that appear to be escalating in cities in other Canadian provinces.
RCMP Cpl. Jim McAnany

enforcement agencies might expect to see increased levels of crime."[1]

Demographic changes will also affect the family and civil areas of the Justice system. The increase in family breakdown and the rise in single parent families will require continued intervention by the Justice system as families dissolve marriages, divide property, settle custody disputes and need maintenance orders. Increases in elderly dependents and young persons unable to find regular employment may mean court ordered financial assistance for a broader group of dependents. While these areas are significant, this analysis focusses on the impact of demographic change on the criminal justice system since it covers the most clients and consumes the most resources.

ISSUE 37: THE IMPACT OF THE DEMOGRAPHIC PROFILE OF THE POPULATION ON CRIME RATES



Description

Crime is defined as acts and behaviours for which society provides formally sanctioned punishments...criminal acts are specified in written law (the Criminal Code of Canada and other federal statutes). The term "crime rate" refers to crimes reported to police (measured by the UCR and calculated per 100,000 population).

Many factors influence the rate of reported crime, including changes in the public's reporting behaviour, police charging practices, policy and legislative changes. In fact, what we classify as crimes changes as the morals and values of society evolve. For example, public awareness campaigns changed public attitudes against impaired driving and may have increased reported rates initially. Overtime, as legislative and enforcement mechanisms are used, their reported incidence declines. In family violence cases, New Brunswick's policy of laying charges in domestic disputes limits police discretion and ensures reporting. However, legislative changes can also have unintended effects. In 1983, legislative change gave police greater latitude in assault cases, especially sexual assaults. This change in definition and charging practices has influenced the overall increases in rates of reported violent incidents since 1983, and has had a major effect on the rate of reported assaults.

Population shifts may lead to smaller numbers in the groups most likely to commit crimes, but economic factors and social policy changes may override their effects. The instability of the family unit, lack of income security, reduced employment opportunities and financial assistance for education may increase the disenfranchisement of our youth and increase their rate of participation in crime. Their demographic profile shows that they already are at a great disadvantage compared to the general population.

The Canadian Centre for Justice Statistics (CCJS) says varying degrees of urbanization, population density and migration, and differences in police resources explain some of the geographic differences in crime rates. They note the sense of belonging which comes from living in smaller communities tends to lead to lower levels of crime. This is significant for New Brunswickers because 91% of us live in census subdivisions of less than 5000 people.

Analysis

There were 51,691 criminal incidents reported in New Brunswick (6,808 per 100,000) and 2,632,830 in Canada (9,002 per 100,000) in 1994. Crime rates are lower in New Brunswick than in the rest of Canada and rise the further westward and northward one travels in Canada (see Figure 1). New Brunswick's court statistics[iii] show that about 3% of our 1993/94 population (44,964 adults; 2,824 youths) were charged with criminal code offences and approximately another 3% were charged with violations of provincial statutes.

Between 1978-1993, crime rates in Canada increased by 33%. The crime rate peaked in 1991 in Canada (10,309 per 100,000), and in New Brunswick (7,352 per 100,000), but while there have been consistent declines since, crime remains higher in Canada (8%) and New Brunswick (7%) than a decade ago.

Table 2[iv]

Shifts in New Brunswick Population - Both Sexes

Age Group	1984 Population	% of Total	1994 Population	% of Total	2004 Population	% of Total	2011 Population	% of Total
12 to 17	74,700	10.3	64,300	8.5	58,500	7.4	53,800	6.7
18 to 34	223,000	30.8	207,300	27.3	187,000	23.8	172,400	21.6
35 to 49	126,300	17.4	175,700	23.1	186.543	23.7	177,843	22.3
50 to 74	138,500	19.1	153,300	20.1	197,562	25.1	239,250	30.0
Totals	723,400		759,300		787,100		797,500	

The actual and projected changes in New Brunswick's population are shown in Table 2. In the last decade, our population increased in total but declined by 1.8% in the youth population (12-17) and 3.5% in the 18-34 year olds. Despite a total decline of 5.3% in these two groups, crime rose by 7% in New Brunswick during this time period. Youths represented 9% of the Canadian population in 1994, but 20% of persons charged with crimes. About half were 16-17, while 36% were 14 - 15 year olds. Most crimes are committed by young adults (18-34 year olds) and the 16-17 year old young offenders.

The population is projected to grow over the next decade, and to the year 2011, but most of the projected growth is in the older group (50-74). A total decline of 7.5% is projected for the youth and young adult population (1.8% in the youth population and 5.7% in the 18-34 year olds) and by a 1% decline in the 35-49 year olds.

Implications

A decrease in numbers in a high crime age group should lead to a decrease in crime rates, but the data does not show this. Neither can we conclude that continued declines will lead to decreases. In fact, participation in crime declines slowly until about age 45. The 5.7% increase in the number of 35-49 year olds in the last decade may have compensated for the declines in the younger group, and partly explain why crime continued to rise. Even so, this middle age group's size is projected to decline marginally. Until larger decreases are experienced in this group, crime levels may not change significantly. We have already experienced a drop of 10,000 in the youth population and a further 10,000 drop is forecasted by 2011. This cumulative decrease may have a more significant effect and youth crime must be tracked carefully to assess these demographic effects. Nevertheless, youths will continue to be a primary focus of the justice system, with a special focus on crime prevention. The biggest population shifts are forecast in the oldest and youngest groups, who represent a very small portion of offenders.

ISSUE 38: THE IMPACT OF AGE ON THE NATURE OF CRIME COMMITTED

Table 3

Persons accused in violent and property incidents, by age in Canada, 1992

Age Group	Percentage of total population	Persons accused, violent incidents (n=58,479)	Persons accused, property incidents (n=140,177)
12 to 17	8.1	12.9	27.2
18 to 24	9.9	22.0	28.0
25 to 34	17.4	33.2	24.4
35 to 44	16.0	18.5	11.4
Sub-totals		86.6	91.0
All other ages	48.6	13.4	9.0
Totals	100	100	100

Description

The types of crime do vary by age group as Table 3 demonstrates. This table shows the involvement in crime for two of the major crime categories - violent crimes[v] and property crimes[vi]. It provides a perspective on the level of criminal activity by age group relative to their percentage of the overall population.

Analysis

Of the total criminal code incidents in 1994, 58% were property crimes, 31% were other[vii] (prostitution, arson, mischief, etc.) and 12% were crimes of violence. Property crimes increased by 15% in Canada, and by 21% in New Brunswick, since 1978. New Brunswick has the second lowest property crime rate in the country (3,262 per 100,000 compared to the Canadian average of 5,214).

The rate of violent crime in Canada decreased by 4% in the past two years, but rose by 49% in the last decade. However, common assaults accounted for 60% of this increase (incidents where there was no report of serious injury). When common assaults are subtracted, the rate is still 24% higher than in 1984. Despite this rapid rate of increase, violent crime represents a relatively small proportion of total crime at 11.5% of total criminal incidents.

New Brunswick's profile is not as favourable. The rate of violent crime in New Brunswick rose by 70% during the same period and now stands at 13.7% of total criminal code offences. We also had a large increase in common assaults (129% increase, compared to 97% in Canada during the decade). Sexual assaults rose 453% from 1984-1994, compared with 126% for Canada. Despite these increases, by 1994, New Brunswick had the third lowest violent crime rate in Canada (935 incidents per 100,000 compared to the national average of 1,037).

Young adults (18-24) represented 10% of the population in 1992, roughly comparable to their youth cohorts (12-17), but were responsible for almost twice as many violent incidents (Table 3). Adults (25-34) represented 17.4% of the population, just over double their youth cohorts, yet were responsible for nearly three times as many violent incidents. Thus, offenders 18-34 were responsible for roughly half the violent and property crime. As the adult matures (35-44), their participation in crime is more comparable to their population proportion.

Canadians under 12, and 45+, represent almost half of the population yet were only responsible for 13.4% of crimes (see Table 2). When the groups covering ages 12-44 are combined, they account for 86.6% of those accused in violent crimes and 91% of property crimes. The 25-34 age group are the most likely to be involved in violent crimes (33.2%) and when combined with the 12-24 year olds, account for more than two-thirds of people accused in violent incidents.

The average age of a New Brunswicker charged with violent crime was 27, compared to 31 in Canada. New Brunswick offenders are generally younger across all the crime categories. Their involvement in crime gradually decreases after age 30, the median age for most offenses. Youths (12-17) in Canada accounted for almost half of the persons charged with motor vehicle theft. In fact, 70% of those charged with motor vehicle theft are aged 23 and under.

Across Canada, crimes committed by offenders over the age of thirty include abduction, impaired driving or sexual offences. In all age categories, most crimes are committed by males, but significant numbers of women are involved in abduction (38%), fraud (30%), theft of $1,000 and under (33%), and prostitution (55%) .

Implications

The decreases in the younger age groups over the past decade may account for the recent declines in property crimes in Canada and New Brunswick. Since motor vehicle thefts are most often committed by younger males, the decline in the 15-34 age group may lead to further decreases in this sub-category of property crime.

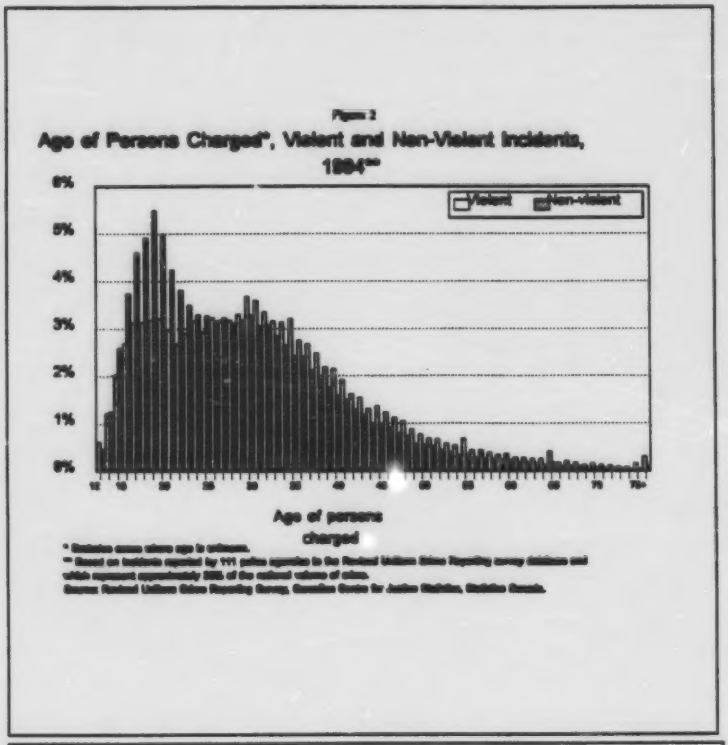
The rise in violent crime is a concern, since it is most often occurs in the older age group and this group's size is expected to decline only slightly. The increase in violent crimes is important because violent crimes, especially those of a sexual nature, are resource intensive, requiring specialized resources from all sectors. Crimes of violence often lead to harsher sentences, including incarceration. Violent crimes involve a victim, elevate the level of fear and can affect the perception of justice in the community.

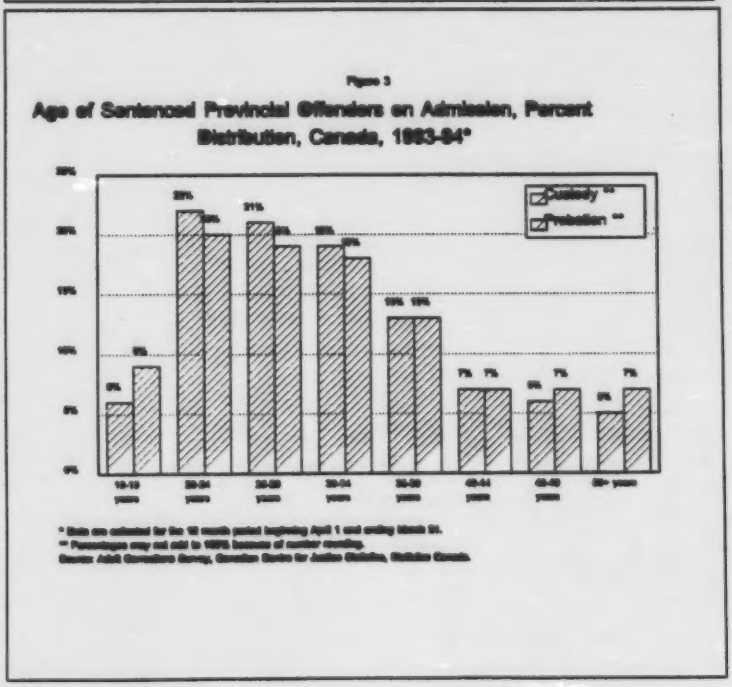
The instability of the economy, the changing structure of the job market and the disintegration of social values and family structures are also factors which may lead to a sustained increase in violent crime. "Survival" crimes by those who are poor, as well as an increase in fraud, tax evasion, smuggling, and drug trafficking are expected to rise. The increased responsibilities on the family to provide for aging relatives, care for children and hold down jobs will mean that families will be under increased stress.

Considerable investments in research, planning and training have been made in the last decade to combat family violence and more will be required. As the nature of crime changes, the resources within the justice system must be trained to deal with these changes. Police indicate that focussing on violent crime has prevented them from being able to adequately address the rising incidence of white collar crime. Lack of training in the area of forensic accounting is a limiting factor in their ability to detect, investigate and present prosecutable cases in this area. Moreover, they note that the credibility of many white collar criminals allows them to operate with a cloak of respectability.

While no statistical increases have been documented, most jurisdictions in Canada are expecting increases in white collar crime and technological crimes in the future. Appropriate mechanisms will have to be identified to deter participation in this very lucrative type of crime for the offender. Businesses may have to play a role in identifying these crimes through increased internal controls and audits.

ISSUE 39: THE DEMOGRAPHIC PROFILE OF THE ACCUSED/OFFENDER





Description

Figure 2 shows the age of persons charged in Canada with violent and non-violent incidents in 1994, by age group.

Figure 3 shows the percentage of offenders sentenced to incarceration by age group, at their age on admission.

Analysis

Fifteen years ago, the adult offender in custody in N.B. was a 21 year old single male convicted of theft with an average sentence length of 30 days.[viii] By 1993/94, the typical offender was older (31) and serving a longer sentence (average of 45 days). Recently, the age of persons sentenced to provincial custody is increasing across the country. In 1993/94, 69% were 18-34, up 7% from 1986/87. The proportion of those age 35 and older has grown from 1/4 to 1/3 in this time period.

Figure 3 provides a Canadian context, showing that persons in their twenties made up 43% of those admitted to provincial custody, with an average age of 29. In New Brunswick, for the past four years, the average age remained at 31 and the average education level is grade 10. Sentences of incarceration for twelve months or more were most often for sexual offences.[ix] The offender was a 37 year old married male, with a grade nine education, sentenced to one year for sexual assault, usually against children.

Offenders serving an intermittent sentence (eg. serves weekends) were usually for impaired driving offences, had similar age and educational profiles and previous criminal and incarceration records. In 1994, the offender under supervised probation was a 30 year old male with grade 10 education.

The young offender in secure custody within a provincial institution is a 16 year old with a grade eight education and a previous history of delinquency. Ninety-one percent were males and their offense was: property crimes (25%); violations of open custody (27%) ; probation violations (12%); assault (3%) and escaping custody (12%).

Only 1% of young offenders were in secure custody because it is used as a last resort in New Brunswick.

Studies conducted in 1992 and 1993 provide some insight into the background of these young offenders. Approximately 75% came from a family where one parent was an alcoholic. Over 75% demonstrated evidence of poor self esteem and 67% had a history of being the victims of child abuse (physical and sexual), documented by the Department of Health & Community Services prior to admission. The majority had psychological problems, were two years behind academically, and 17% had been diagnosed with a learning disability.[x]

In 1993/94, 42% of the cases in Canada's youth courts were recividists[xi]. Of this group who had been involved in the criminal justice system before, 20% had one prior conviction, 10% had two prior convictions and 12% had three prior convictions. Males were more likely to be recidivists (44%) than females (33%). Cases involving recidivists were four times more likely to result in custody terms than cases for first-time offenders.

Implications

Studies show that New Brunswick's data is consistent across Canada. Most persons found guilty of committing crimes are young males between the ages of 16 and 24 years of age who are unemployed, under-educated and who live in low-income households, often with a single parent. Only a small proportion of New Brunswickers are involved in crimes, but those who are have limited educational backgrounds, poor job opportunities and weaker family structures. Most are young adults, but in recent years the offenders are increasingly older upon admission to an institution. It is also clear that once offenders get involved in criminal activity, many re-offend.

A recent study of the 25 largest municipalities in Canada (none in New Brunswick) looked at the relationship of demographic characteristics and certain types of crimes. It found that "as the percentage of the population in a municipality increases of those who are unemployed, or who live in low-income or single parent families or rental housing, so does the recorded incidence of certain offences. Similarly, as the percentage of the population without a high school diploma increases, so does the rate of assault and sexual offences. These findings lend support to both social deprivation and opportunity theories: those municipalities at highest risk of certain offences are those with the highest proportions of young male adults, or a combination of idle, unemployed people and single-parent households who, if working, must frequently leave their homes and property unattended."[xii]

Illegal or criminal behaviour seldom appears without other dysfunctional or anti-social symptoms also surfacing. Problems in school, substance abuse resulting in medical intervention, emotional or mental problems, illiteracy, a history of physical abuse, as abuser or victim, poverty and joblessness can all contribute to criminal behaviour. Experience shows that mechanisms must be developed to identify these early warnings, and strategies must be developed to try to deal with the escalation of this type of behaviour and prevent the youth from being with dealt with in the justice system.

ISSUE 40: THE IMPACT OF AN AGING POPULATION ON VICTIMIZATION

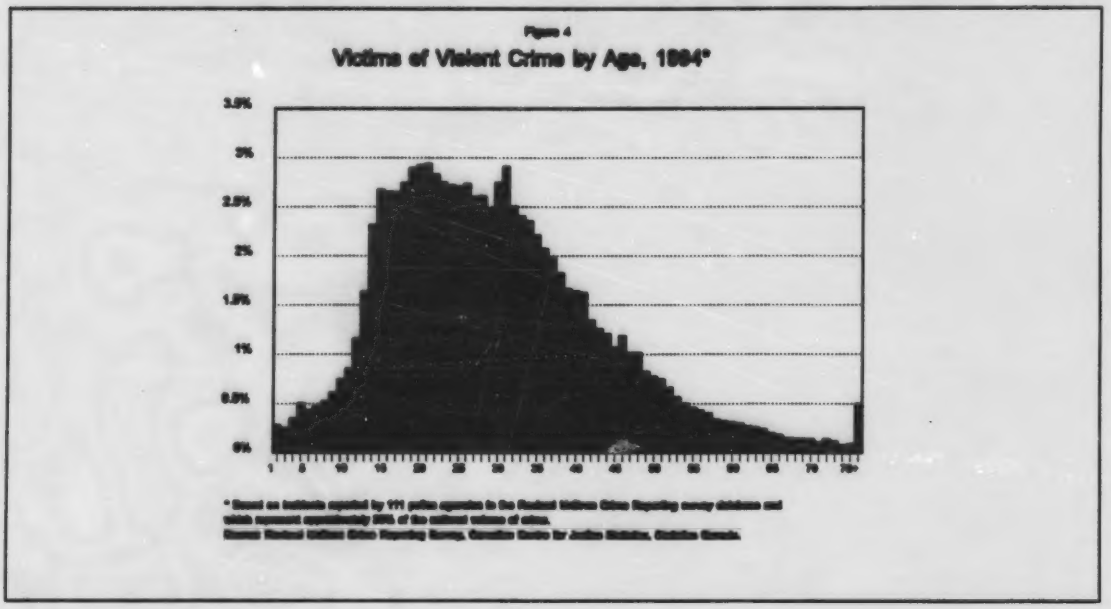


Table 5[xiii]

Victims of Violent Crime in Canada by age (1993)

Type of Crime	Under 12	12-17	18-24	25-34	35-44	45-54	55-64	65+
Sexual Assault (n=9,767)	3,213	2,941	1,499	1,169	542	169	56	35
Assault (n=73,716)	2,893	8,928	15,160	21,169	12,083	5,285	2,027	2,055
Personal Robbery (n=9,617)	175	1,481	1,780	2,009	1,499	991	700	691

Description

Figure 2.20 shows the age range for victims of violent crime from the 1994 UCR survey. The UCR defines a victim as a person who is the target of a violent/aggressive action or threat. UCR victimization information is limited to victims of violent crimes (11.5% of total crimes) and to those forces using the more recent UCR survey, UCR II.[xiv] It is generally accepted that the official crime rate does not reflect all crimes occurring in Canada. Thus, information on the levels of victimization also comes from the General Social Survey (GSS). Statistics Canada conducts the GSS every four years to reflect the broader incidence of crime, the knowledge of Canadians about the Justice system and their attitude toward it. This telephone survey of households reports on levels of personal, violent and household

victimization, thus its figures will be higher.

Table 5 summarizes Statistics Canada's victim data from 1993 UCR survey by major age category.

Analysis

In 1994, the median age of a victim of violent crime was 27 and most were 45 and under, the same age range as the offenders. The majority of victims were assaulted, and most were common assaults and sexual assaults. Approximately one-third of the victims in 1994 were under 12 years of age, and approximately another one third were age 12 to 17. Victims of sexual assault are more often ages 12-34 while victims of common assaults are more likely to be older (18-44), as are robbery victims.

Females represented one half of victims of violent crimes in 1994, accounting for most sexual assault victims (85%) and more than one-half of victims of assault level 1 crimes (54%). Males were more often the victim of robbery (63%) and assaults level 2 and 3 (70%).

Seven in ten victims of violent crime knew their assailants: 15% were victimized by a spouse, 6% by an ex-spouse, 4% by a parent, 7% by another family member, 7% by a close friend (includes intimate and ex-intimate relationships), 7% by a business acquaintance, and 27% by a casual acquaintance). The accused was a stranger to 19% of violent crime victims but over three-quarters of robbery incidents were committed by strangers.

Victims of youth crime were aged 65 or more in only 2% of the cases and these were most often non-sexual assaults (75%). An analysis of data from 13 police departments[xv] found that 3% of violent crime victims were 60 years of age and older, considerably less than their proportion in the 1991 Canadian population (16%).[xvi] When they were victimized, it was most often robbery and 40% of the elderly victims were female. Elderly victims were victimized by immediate family other than their spouses more often than were other victims (18% versus 1%), particularly by their children (whose mean age was 34).

The Homicide Survey shows that only 11% of homicide victims were elderly, considerably less than their correspondence proportion in the 1991 population (16%). However, a larger proportion of elderly than younger victims were killed during the commission of another criminal offence (robbery), and when they did die, the homicide most often took place in their own home.

Implications

UCR data shows that victims of violent crime are more often young, than elderly. Youths are generally not the ones responsible for violent crime, and when they are, their victims are from their own peer group. The data doesn't show any inter-generational conflict. Those most at risk of victimization are young children and women because of the high rates of sexual assaults against them. The greatest risk of victimization is by an intimate or acquaintance, not a stranger, except in the case of robbery. Elderly persons were not often the victims of crime. Part of the explanation lies in their more limited mobility. As seniors live longer and are more mobile and visible, this may prove to be less significant. The high number of children, youth and young adults who have been victims of sexual assault will put greater demands on specialized services in the future as they deal with the aftermath of this experience.

In recent years, the needs of victims have had a greater emphasis in the criminal justice system, and this trend is expected to continue. In addition, high profile cases which have had extensive media coverage have heightened the public's sensitivities to crime and its

consequences on them. The 1993 GSS reported that while we are no more at risk, Canadians are more fearful. Despite the fact that victimization did not rise over the prior year, almost half of Canadians over the age of 15 years old (46%) thought that crime had increased in their own neighbourhoods. As many as 27% of Canadians reported that they don't feel safe walking alone in their neighbourhoods at night, particularly females (42%) and urban dwellers (29%). In fact, women and urban dwellers actually did experience personal victimization more often. Together with young Canadians and those engaged in more evening activities away from home, they reported the highest personal victimization.

Data Sources and Data Limitations in the Canadian Criminal Justice System

The administration of Justice in Canada is complex, involving three primary groups: the police, the courts and correctional services. Services are provided and individual decisions are made within each group yet the effectiveness of the Justice system is dependent on successful cooperation across all of them. The police deal with the largest number - the incidents of crimes reported to them, the courts count number of charges and appearances, and corrections count number of offenders (admissions). There is a normal level of attrition which occurs as cases are reviewed and charges are approved for hearing in court. Not all cases dealt with by the police proceed to court, and not all cases heard in court are dealt with in the correctional system. The systems are managed independently and the data is retained by the respective agencies with no integration across the total system. Since each group uses different measures to monitor the use of their services, it is difficult to track an incident across the system.

To provide national comparability, the provincial, territorial and federal government agencies responsible for the administration of Justice agreed on common definitions and developed sector specific national statistical surveys. However, like most provinces, New Brunswick is not yet able to participate in them all. Since we do not have automated systems capable of supplying data from Adult Courts and Adult Corrections, we do not have complete comparable demographic data on adults. We rely heavily on incident information reported to police in the UCR. Better information is available on the youth population, since we can draw statistics from the UCR, Youth Court and Youth Custody surveys.

The statistics used in this analysis are taken from these surveys and the province's own statistical data. In addition, some of the source data is taken from one-time special studies. Statistics Canada's GSS is used to supplement official crime statistics on victimization.

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[i]. "Crime Trends in Canada, 1962-1990", Juristat, Canadian Centre for Justice Statistics, 1992, Vol. 12, No. 7, p. 12-13.

[ii]. The Uniform Crime Reporting Survey (UCR) is the main vehicle for collecting statistics and reporting on crime across Canada. It counts and describes those criminal incidents which are reported or become known to the police. The UCR I (or aggregate UCR) has been in existence since 1962. UCR II (or Revised UCR) was introduced in 1988 and by 1994 33% of the national caseload was captured using the more comprehensive instrument. However, the RCMP who police major sections of the country, including approximately 50% of New Brunswick, are still reporting using UCR I. This limits the depth of analysis which can be done in many areas given that coverage of UCR II does not extend to RCMP, Saint John and several of the smaller police forces.

[iii]. Justice Information System Management Reports, Provincial Courts, April 1, 1993-March 31, 1994, Detailed Annual Report. (Actual number of persons charged are actually be lower since an individual can be charged more than once in any given year.)

[iv]. Figures for 1984 and 1994 are actual (Statistics Canada); figures for 2004 and 2011 are N.B. Statistics Agency projections

[v]. Violent incidents involve offences that deal with the application or threat of application of force to a person. These include homicide, attempted murder, various forms of sexual and non-sexual assault, robbery and abduction. Traffic incidents that result in death or bodily harm are included under *Criminal Code* traffic incidents.

[vi]. Property incidents involve unlawful acts with the intent of gaining property but do not involve the use or threat of violence against an individual. Theft, breaking and entering, fraud and possession of stolen goods are examples of property crimes.

[vii]. Other criminal code offences include mischief, bail violation, disturbing the peace, offensive weapons, prostitution, arson, and other.

[viii]. Annual Report of the Solicitor General of New Brunswick, 1993/94.

[ix]. New Brunswick Masterplan for Correctional Facilities, Adult and Young Offender Custody Requirements, New Brunswick, Department of the Solicitor General, April 1994.

[x]. Ibid.

[xi]. Recividist, in this instance, is defined as a case heard in 1993/94 involving a young person for whom one or more earlier charges resulted in a finding of guilt from the youth court in the same province or territory. In simple terms, a repeat offender.

[xii]. Ibid., p. 7.

[xiii]. Statistics provided by CCJS, Statistics Canada.

[xiv]. New Brunswick police forces participating in UCR II in 1994 include Fredericton, St. Stephen, Shediac, Edmundston, Sackville, B.N.P.P., Newcastle, Caraquet, and Moncton. Other forces, including the RCMP, report using the original UCR survey which does not include micro level data, including victim information.

[xv]. Included Fredericton (population 44,700) and St. Stephen (population 5,000) as two New Brunswick police forces reporting with UCR II in 1992. The data are not considered representative of any geographical region in Canada, and are provided to give an indication of the characteristics of violent crime.

[xvi]. "Elderly Victims of Violent Crime", Juristat, Canadian Centre for Justice Statistics, Vo. 12, No. 15, August, 1992.

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April, 1996

NEW BRUNSWICK
AT THE DAWN OF A NEW CENTURY

A WORKING PAPER ON

DEMOGRAPHIC ISSUES AFFECTING NEW BRUNSWICK

VOLUME II
ECONOMIC AND LABOUR FORCE ISSUES FOR THE 1995-2000 PERIOD

New Nouveau Brunswick

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Executive Summary

Compared to the fluctuating periods of strong expansion and sharp recession of the 1980's and early 1990's, the next fifteen years is expected to be a period of slower, more sustainable economic growth in the industrialized countries. Better management of economic fundamentals and continued public sector fiscal restraint should keep inflation at acceptable levels. More emphasis will be placed on expanding external trade and the most efficient use of technology in production processes. Changing demographics (especially in North America) can be expected to begin to exert pressure on labour markets and existing consumption and social program delivery patterns.

The Canadian economy can be expected to outperform the United States over the 1995 to 2010 period, given our greater access to resource products and the advantages resulting from the industrial restructuring of the early 1990's; lower labour costs, rising productivity, increased use of technology and better quality service. In New Brunswick, real growth will be slower than for Canada, but increased demand for food, forest, mineral and related manufactured products and telecommunication and business services will lead the economy. The overall contribution of the public sector to the economy will be lessened. Population growth will be slower than in the last two decades, but progress should be made on lowering the unemployment rate towards the national average. Should major projects such as a large new industrial or business services facility, increased national highway system construction or another large shipyard contract be announced, economic prospects for the province would be greatly enhanced.

In preparing this report, we have relied on Statistics Canada and U.S. Bureau of Commerce for historical data. Forecasts of the U.S. variables are from the Conference Board, Data Resources and Blue Chip Economic Indicators. For Canada, we have mostly used the Conference Board and Data Resources forecasts. In New Brunswick's case, both our own projections and those of the Conference Board have been used.

International and National Environment

Internationally, the next fifteen years should see continued movement towards globalization of trade under the World Trade Organization with existing regional trading blocks (such as NAFTA) expanding to other economic zones. It is anticipated three main trading blocks will eventually emerge; the Americas, Europe and Asia. North America's trade with Asia should grow faster than with Europe. In the recent recovery phase from the 1990-91 recession, Canadian economic growth has been sparked by higher levels of exports, especially with the additional advantages of increased productivity, technology, lower labour costs and/or a weaker currency. In complimentary fashion, stronger domestic economic growth usually leads to a rise in imports as consumers gain wealth and increase purchases of goods and services.

Barring major shocks such as wars, natural disasters or energy crises, economic growth in the newly industrialized countries (NIC's) such as China and the dynamic Asian economies will continue to outstrip the traditional economic powers of continental Europe, Japan, the United Kingdom and North America. NIC governments have promoted exports by adopting and expanding technology while maintaining plant and labor cost advantages. Trade among the industrialized countries is still growing, but the emerging countries of Asia and Latin America are diversifying their exports and moving away from dependence on a small or limited number of commodities. However, the NIC's comparative advantages in cheap labour and technology will gradually be eroded by the traditional industrialized economies as they become more globally-oriented and competitive. The industrial restructuring of the American, Canadian and Western European economies after the 1990-91 recession fundamentally changed business attitudes towards world markets with the more efficient use of technology, adoption of world-wide quality production standards, increasing productivity, out-sourcing of business

inputs and a more flexible, better trained and cost-effective work force. Target marketing and niche production have become the bywords and credo of business.

On average, real economic growth in the industrialized countries can be expected to be at more modest levels than in the 1960's and 1970's and be more effectively managed to lessen the swings of the business cycle. We can expect more sustainable economic expansions and less-severe recessions. Better control of the economic fundamentals by central bankers should alleviate inflation as a major medium-to-long term concern, except possibly in the newly industrialized countries. It is anticipated most governments will continue, and in some cases expand, programs of fiscal austerity.

In the United States, the "soft landing" of 1995 leads to a period of growth in the next fifteen years at about the same average rate (2.6%) as in the 1980's. Investment in new technology and machinery and equipment and exports will lead the economy as business strives to stay competitive in a global market. The strength, diversity and size of the domestic U.S. market will also provide strong impetus. Growth among the geographic regions of the U.S. will become more balanced, with a more positive contribution from the Northeast. Inflation is expected to average about 3.5% over this period, about a percentage point below the last ten years. On an output basis, unit labour costs are estimated to increase about 2.9% per year, compared to over 5.0% in the latter half of the 1980's. Unemployment should average about 6.0%, close to the last decade. Major initiatives in government policy, such as health care, are not expected to significantly impact the economy if matched by savings in other areas.

The Canadian economy can be expected to outperform the U.S. economy over the longer-term. According to national forecasting groups such as the Conference Board and Data Resources, real growth will average about 3.4% over the 1995 to 1999 period,

led by exports, business investment and a stronger contribution from the consumer sector than has been the case in the last five years. However, consumption will be restrained by modest employment and income gains and an aging population's changing patterns of personal expenditures. Growth will level off to the 2.7-3.0% range over the 2000-2010 period. Increased global access will be very beneficial to Canada, especially for resource products (forestry, mining and agriculture), manufactured goods, business services and technology. Given the degree of integration of our economies (currently 80% of foreign trade), the U.S. will remain by far our largest trading partner. Additional intra-regional markets in Mexico and other Central and Southern American countries will be developed.

Measuring the productivity - or the amount of output per unit of input - of an economy is one of the better ways to gauge its economic health and progress. As productivity rises, the economic well-being and living standards of the work force tend to increase. Labour productivity[1] is the most familiar measure and is simply defined as output (in this case Real GDP) divided by the number of workers or the number of hours worked. For Canada, business sector labour productivity over the 1961 to 1975 period increased about 3.3% per year while real GDP increased at 5.2% per year. Between 1975 and 1991, productivity slowed to 1.3-1.5% per year, which some analysts believe may be a more normal level of growth, while real GDP increased at an average rate of 2.8%. Partial explanations of the slowdown may be the energy shocks of the 1970's which idled a lot of productive capacity that had been in use during the long-term economic upswing following World War II. Significant real wage increases and changing consumer expenditure patterns were also emerging during this period. For consumers, living standards did increase during this period but this was largely caused by the additional

[1] Labour market productivity and its related economic performance should be interpreted carefully since these indexes indicate changes in capital-to-labour ratios as well as increases in productivity.

opportunities for women in the workplace which provided more disposable family income. In 1994, business registered the best productivity performance in ten years (2.4%) as restructuring and moderate wage increases contributed to a decline in unit labour costs (labour input per unit of output) for only the second time since 1962. Forecasts of manufacturing labour productivity put growth between 1.2 and 1.5% till the end of the century, before gradually increasing to 1.9% by the year 2010. For services, growth should be closer to 1 percent. Unit labour costs are anticipated to be in the 2-3 percent range for the forecast period.

With the Bank of Canada expected to remain firm on inflation, CPI increases between two and three percent are anticipated, leading to average nominal economic growth of 5-6 percent. The large Canadian output gap (difference between current and potential output) and improved inflation performance vis-à-vis the U.S. should combine with improvements in government fiscal situations to allow a moderation of interest rates to slightly above U.S. levels. This should lead to an appreciation of the dollar to the 80-85 cents U.S. range by the end of the period (or perhaps even sooner), approximately its purchasing power parity value. Access to natural resources, rising productivity, low unit labour costs and increased penetration of technology will allow Canada to exercise control over production costs and thus compete effectively in world markets despite the gradual erosion of our current "low dollar" advantage. Most of our industrial commodities are priced in U.S. dollars on world markets.

Demographic trends indicate national population growth will remain around 1.0% to 2010, although a significant lowering of immigration levels would have a major impact. The labour market will be influenced by the slow population growth and an aging source population. Given the economic and demographic conditions, the national unemployment rate should decline to about 7.0% by 2010. With inflation pressures

largely under control, a relatively stable unemployment rate and the large output gap dropping only slowly, upward pressure on collective bargaining settlements and labour income will be moderate, with real income growth averaging about three percent.

Regarding the globalization of trade, the FTA will be fully implemented (total tariff elimination except for products under supply management programs) by January 1st, 1998. At some point in the future, NAFTA will enlarge to include Chile and probably some of the other South and Central American economies who now have their own trade group. Both Canada and the U.S. are already in discussion with the European Union regarding trade liberalization. Disputes under the NAFTA continue to be forwarded to international panels for resolution, with the issues of softwood lumber, sugar and products including sugar and supply-managed food products of special interest to New Brunswick. On a provincial basis, the Internal Trade Agreement came into force in July 1995, providing the promise of more ease of access for interprovincial trade.

Economists have the tendency to extrapolate recent trends into the future and currently there is little deviation from this "herd" instinct. However, there is a good chance that economic growth over the next decade in North America could be stronger than now forecast as the structural adjustments in the U.S. and Canadian economies over the past decade have well-positioned both countries to take advantage of growth in demand across the globe. In the labour force, changes to social income programs such as unemployment insurance, pension plans and welfare may lead to an increase in labour force participation and employment and unemployment levels. They may also have the undesirable impact of increasing the unmeasurable or "underground" portion of the national economy.

Another issue facing economic planners over the next 10 to 20 years is a possible world capital shortage. Most industrial countries are facing long-term declines in personal saving rates, rapidly changing demographics to an aging society and high public sector deficits. Taken together, these three conditions have raised concerns that investment capital may not be available over the longer term to meet the requirements of governments and business in either the developed countries or the emerging economies of Eastern Europe and Asia which are requiring huge investment inflows to bring their capital stock up to world standards. If capital is available for investment, interest rates may be prohibitive. Should capital for public sector deficit financing and industrial investment in plant and equipment become more difficult to obtain, adequate rates of overall economic growth may be unsustainable and inflation pressures may be rekindled. Even more pressure on public sector finances could result.

New Brunswick

Traditionally, the New Brunswick economy has performed close to national rates. Similar to the Canadian economy, the province is largely dependent on external economic activity, especially in the United States which is the destination of about two-thirds of our foreign shipments. In fact, the Northeastern section of the U.S. is the initial recipient of about one half of our total foreign exports. Demand for New Brunswick food, forest and mineral resource products, petroleum and related manufactured goods can be expected to remain high, given a period of less robust but more sustainable North American and world economic growth. However, the contribution of the public sector to economic growth will be lessened, removing some of the stability it has historically provided. Overall growth over the next fifteen years should be modestly weaker than the national average, but at the about same rate as Prince Edward Island and slightly ahead of Nova Scotia and Newfoundland.

Real growth in the economy is projected at about 2.6% to the end of the century before slowing to 2.2% over the 2000 to 2010 period. These growth rates are markedly slower then average growth estimates of the 1960's (4.6%) and 1970's (3.9%) and about a percentage point below the 1980's (3.4%). On a productivity basis, average growth in real GDP per employed worker will be weak in the 1990's (0.5%) given the structural changes in the labour market and increased output from the services sector, but will improve in the first ten years of the next century (1.5%) to about the level of the 1970's and 1980's. Comparatively, real GDP per worker grew an average of 2.9% in the 1950's and 3.2% in the 1960's. Given inflation of around 2.0%, nominal GDP should increase in the 4.5-5.0% range.

The possibility exists of stronger productivity growth (and living standards) in New Brunswick than forecast. Recent initiatives by the provincial government to complete the twinning of the national highway system, attention of promoting 'new economy" activity and the emphasis on excellence in education will pay benefits in the next century. As well, the aging of the workforce will provide a broader mix of skills and experience for employers. On the industrial side, the recent re-structuring of the resource industries plant and equipment and continued programs of diversification and increased value added will improve competitiveness and efficiency over the longer term.

Historically exerting a major impact on the provincial economic cycle has been the timing of investment in major public and private infrastructure projects such as provincial government hospital, school and highway construction programs, energy projects, pulp and paper mill expansions and renovations, frigate construction and large commercial projects. Major investments such the Repap coated-paper mill and the Point Lepreau and Belledune energy projects exerted a marked impact on provincial economic growth,

positive during the construction phase and often negative over the short-term immediately following the completion of the project. Real (adjusted for inflation) capital stock data, or the net result of adding new productive plant and equipment capacity to the economy while deleting worn assets, show a strong correlation with economic activity, averaging nearly five

percent growth per year between 1950 and 1980. In recent years, the New Brunswick economy has started a noticeable diversification towards more value-added production and the provision of services to business and persons based on technology (telemarketing and customer response centres). Further establishment of companion industries (software and hardware) to the telemarketing and call centre sectors is expected. This will lead to slower increases in capital stock accumulation with more emphasis on technology. Additionally, capital budget restraint by all levels of government is expected to continue, thus limiting investment in new education and health facilities.

On an industry basis, the mining and manufacturing sectors are expected to lead the economy over the next fifteen years with growth about one full percentage point above the provincial average, followed by communications, transportation, trade and forestry. Construction, community, business and personal services and public administration will report the slowest growth rates. In the case of community, business and personal services, faster growth in the business services sector will be offset by restraint in the community (health and education) services. Nearly all industries will have slower growth in the first few years of the next century. The distribution of the economy between goods (one-third)and service (two-thirds) producing industries will remain roughly similar to the early 1990's. On a historical perspective, growth in the 1960's was led by the goods-producing industries. In the 1970's, demand for commercial and personal services was strong as labour income and consumption growth increased rapidly. By the 1980's,

utilities, resource industries and commercial and business services were the stronger performers.

Work on large investment projects such as the Repap Alcell mill or major highway construction could change substantially the outlook for the construction industry. With the onset of changing demographics, residential construction activity will start to move away from single family urban dwellings to specially designed collective homes for the elderly and recreational properties. While slower rates of increase in family formation will depress overall housing starts, renovation activity on existing housing will rise markedly. In the mining sector, redevelopment programs for three closed mines have been announced with major exploration programs underway in other areas of the province. More linkages between primary agriculture, fish and forest products and the manufacturing sector can be anticipated. Further development of potential forest resources is now underway with expansion and renovation projects at several pulp and paper and various types of construction materials mills. Improved silviculture programs will enhance existing resources and guarantee long-term wood supply. In the agriculture and fishing sectors, further value will be added by import substitution programs and additional fruit, vegetable and livestock cultivation and aquaculture programs.

New Brunswick's population will grow (averaging just under 0.3% annually) at a slower rate compared to the last two decades. The labour force itself will increase slowly (averaging about 0.8%) compared to the last two decades, impacted by the weak provincial population growth (which serves to restrict the number of entrants) and early retirement programs made available to workers at younger ages. By 2010, the labour force will be much older and more work-experienced with nearly three-quarters of the labour force between the ages of 25 and 54 years. Employment growth of about 2.0% in the 1995 to 1999 period and 0.6% over the 2000 to 2010 period will allow a gradual

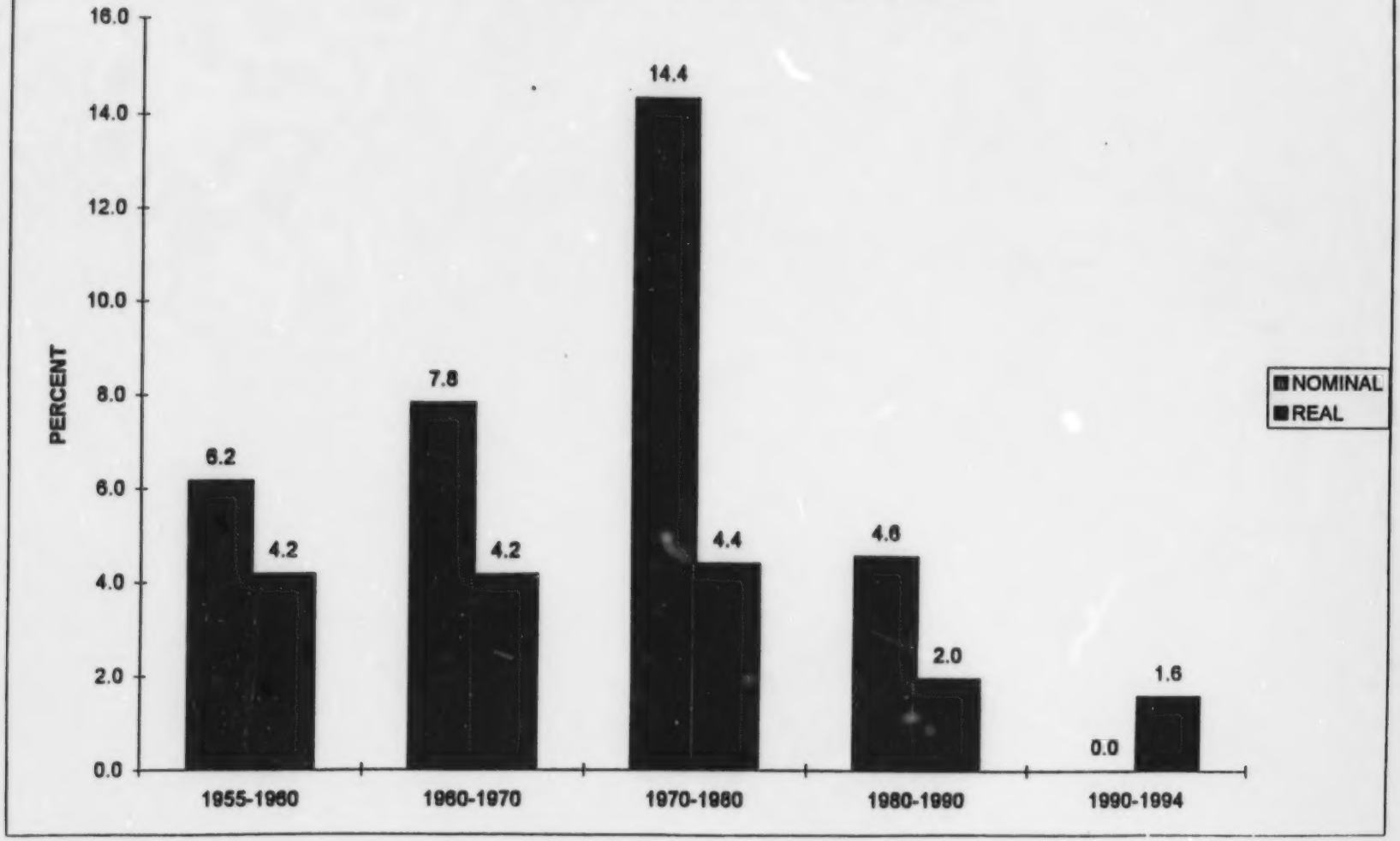
reduction of the unemployment rate to approximately the national rate. Flexible work patterns will become more prominent: work-at-home, job-sharing, part-time, etc. However, should labour force participation continue to rise as in the 1970's and 1980's, progress on lowering the unemployment rate to the national level would be markedly slower.

Consumer inflation, as measured by the Consumer Price Index (CPI) covers about 60% of GDP, excluding deflators for government spending, capital investment and exports and imports. CPI increases averaged below three percent in the 1950's and 1960's, before rising to 8.1% in the 1970's and 5.7% in the 1980's with the impact of energy shocks, strong consumerism, currency fluctuations and high collective bargaining agreements. In fact, the CPI partly fed on itself as a significant portion of wage increases and other prices and government transfer payments were tied to the previous year's CPI rise, thus increasing the upward bias. In the first half of the 1990's, inflation has been recognized as a major impediment to sustainable economic growth and targets have been set and defended by monetary policy in both Canada and the U.S. It is anticipated inflation in New Brunswick will average 1.5% to 2.5% over the medium term.

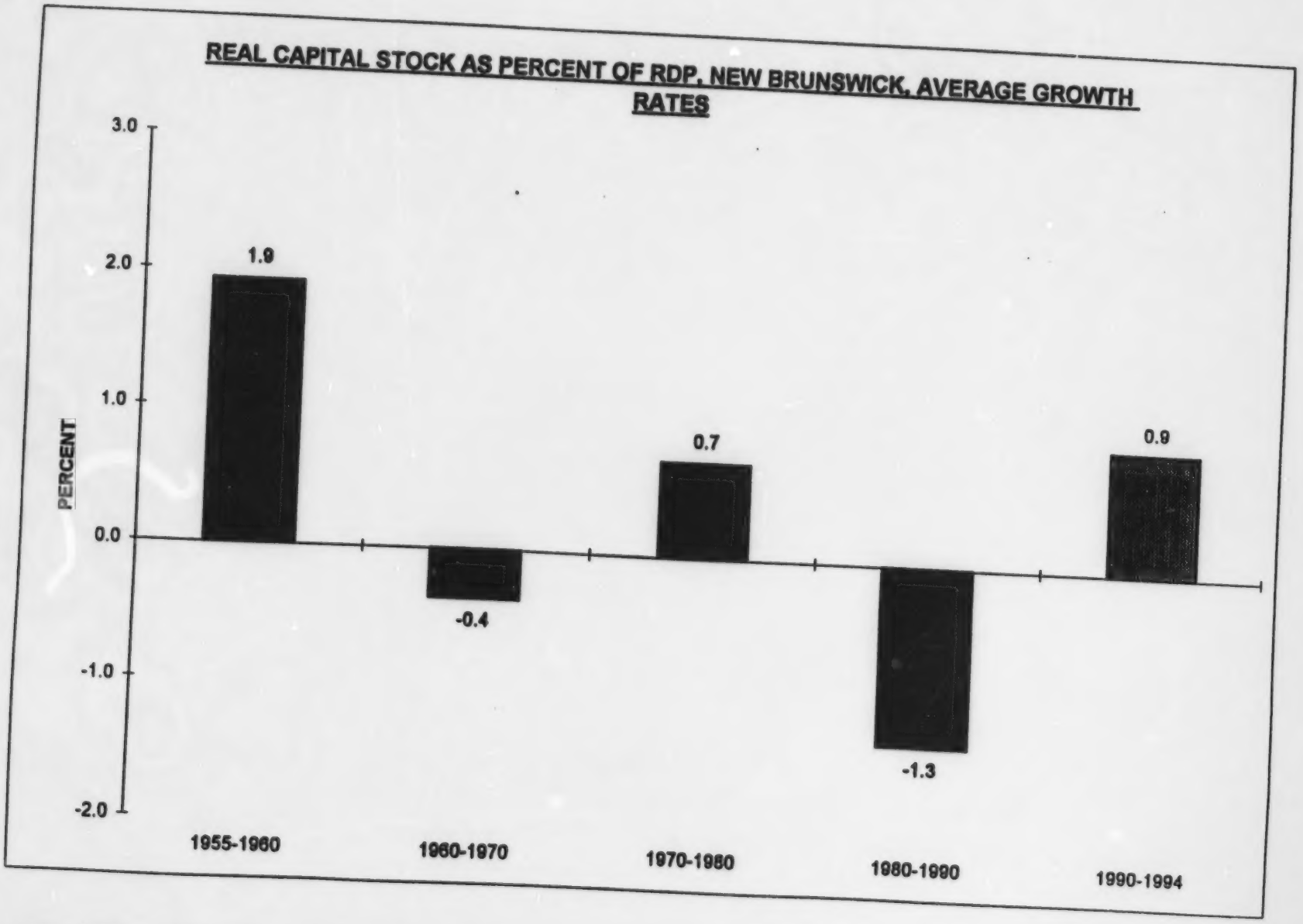
Regarding income, wage and salary growth from increased employment and collective bargaining settlements will be slower than in the last several decades. The business sector will be pressured to compensate workers for the wage freezes and cutbacks of the first half of the 1990's, but issues of benefits, job security, working conditions and flexibility will be at the forefront. The public sector should continue to see below average wage growth. With lower inflation expectations, both labour and transfer payment income tied to the CPI will show more modest increases. Delivery of transfer payments will also change, both in payment structures and available programs. Re-targeting unemployment insurance is one example. National pension plans may become more

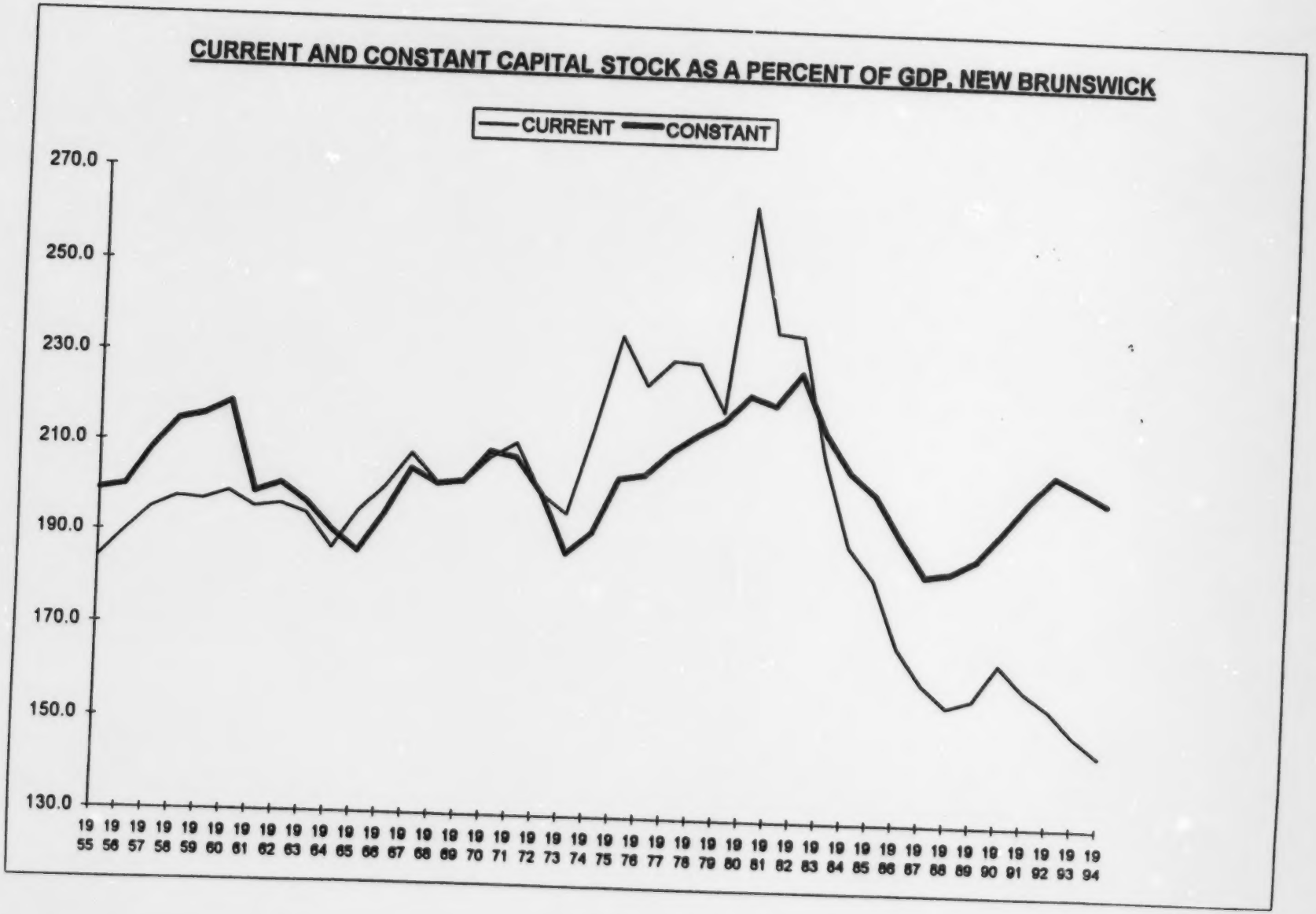
income-tested, a move away from universality. Overall nominal personal income growth will average 3.5-4.5%, about half the rate of the previous three decades. Adjusted for inflation, real personal income per person will average about a 1.5% increase, compared to the over four percent of the 1960's and 1970's and 2.9% of the 1980's.

REAL AND NOMINAL CAPITAL STOCK MINUS PROVINCIAL AND LOCAL PUBLIC SECTOR, NEW BRUNSWICK, AVERAGE GROWTH RATES



RDPSTOCK


REAL CAPITAL STOCK AS PERCENT OF RDP, NEW BRUNSWICK, AVERAGE GROWTH RATES
PERCENT
3.0
2.0
1.0
0.0
-1.0
-2.0
1.9
-0.4
0.7
-1.3
0.9
1955-1960
1960-1970
1970-1980
1980-1990
1990-1994


CURRENT AND CONSTANT CAPITAL STOCK AS A PERCENT OF GDP, NEW BRUNSWICK
CURRENT
CONSTANT
270.0
250.0
230.0
210.0
190.0
170.0
150.0
130.0
19 55
19 56
19 57
19 58
19 59
19 60
19 61
19 62
19 63
19 64
19 65
19 66
19 67
19 68
19 69
19 70
19 71
19 72
19 73
19 74
19 75
19 76
19 77
19 78
19 79
19 80
19 81
19 82
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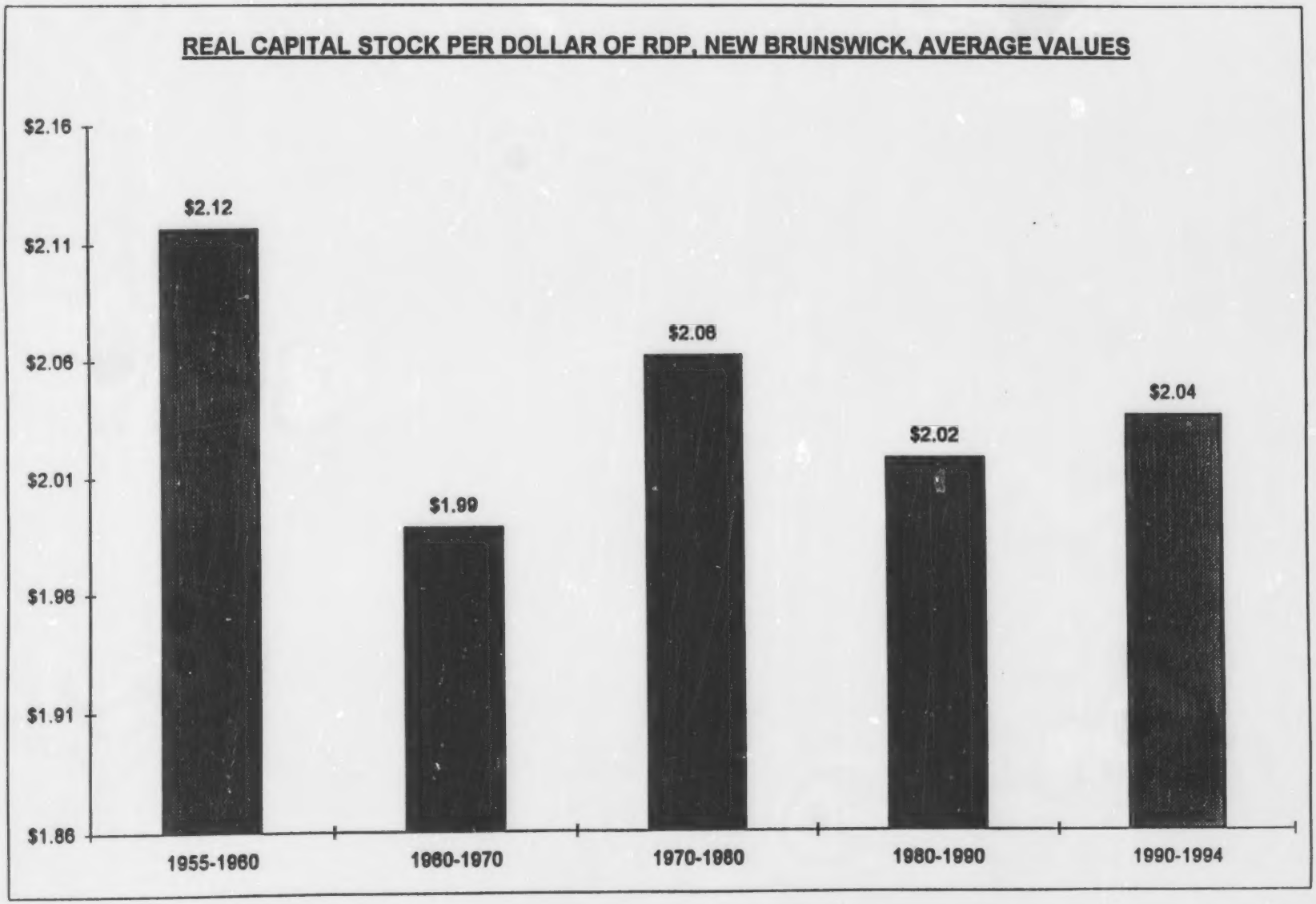
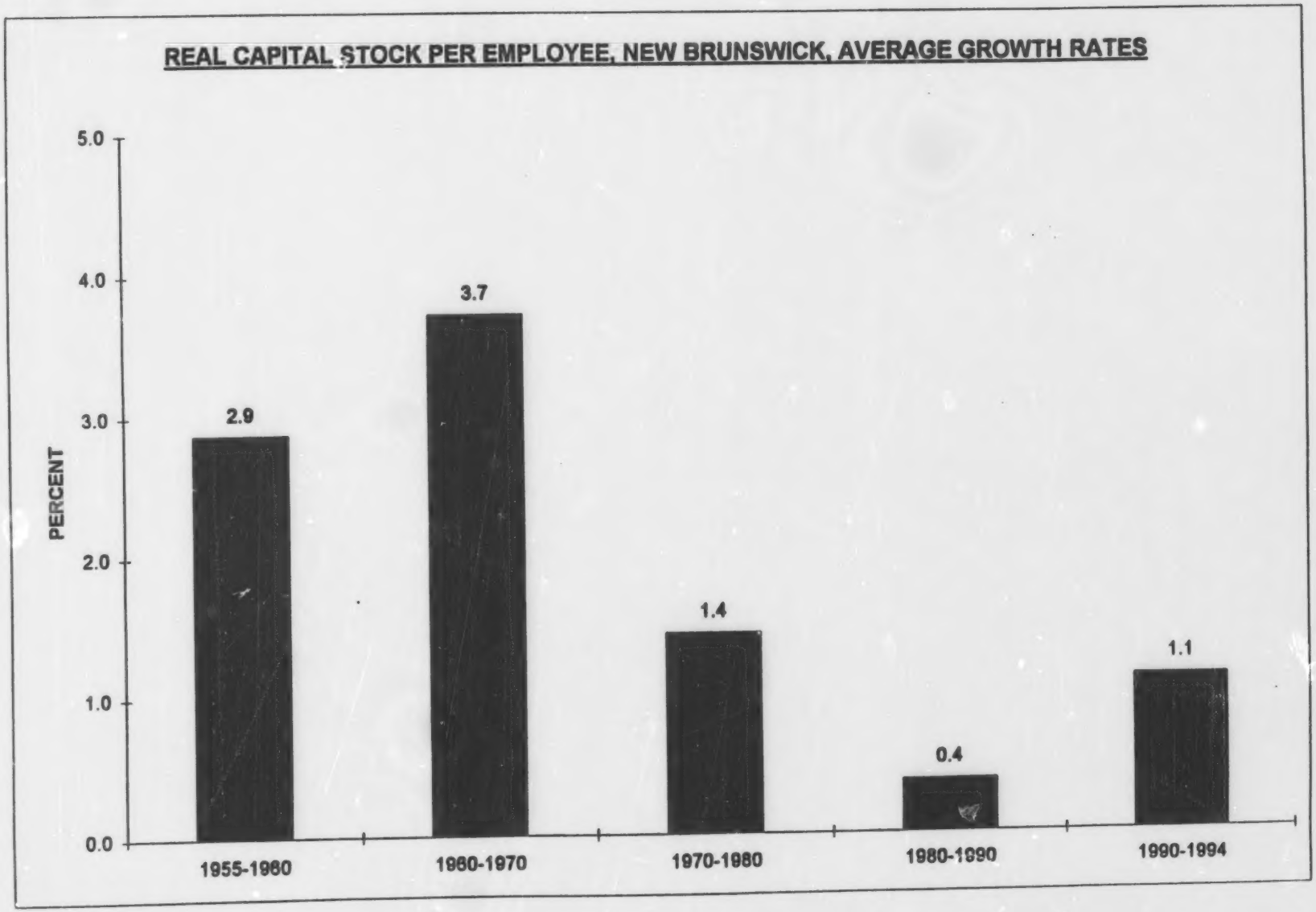
19 92
19 93
19 94

RDPSTK$


REAL CAPITAL STOCK PER DOLLAR OF RDP, NEW BRUNSWICK, AVERAGE VALUES
$2.16
$2.11
$2.06
$2.01
$1.96
$1.91
$1.86
$2.12
$1.99
$2.06
$2.02
$2.04
1955-1960
1960-1970
1970-1980
1980-1990
1990-1994

STOCKEMP



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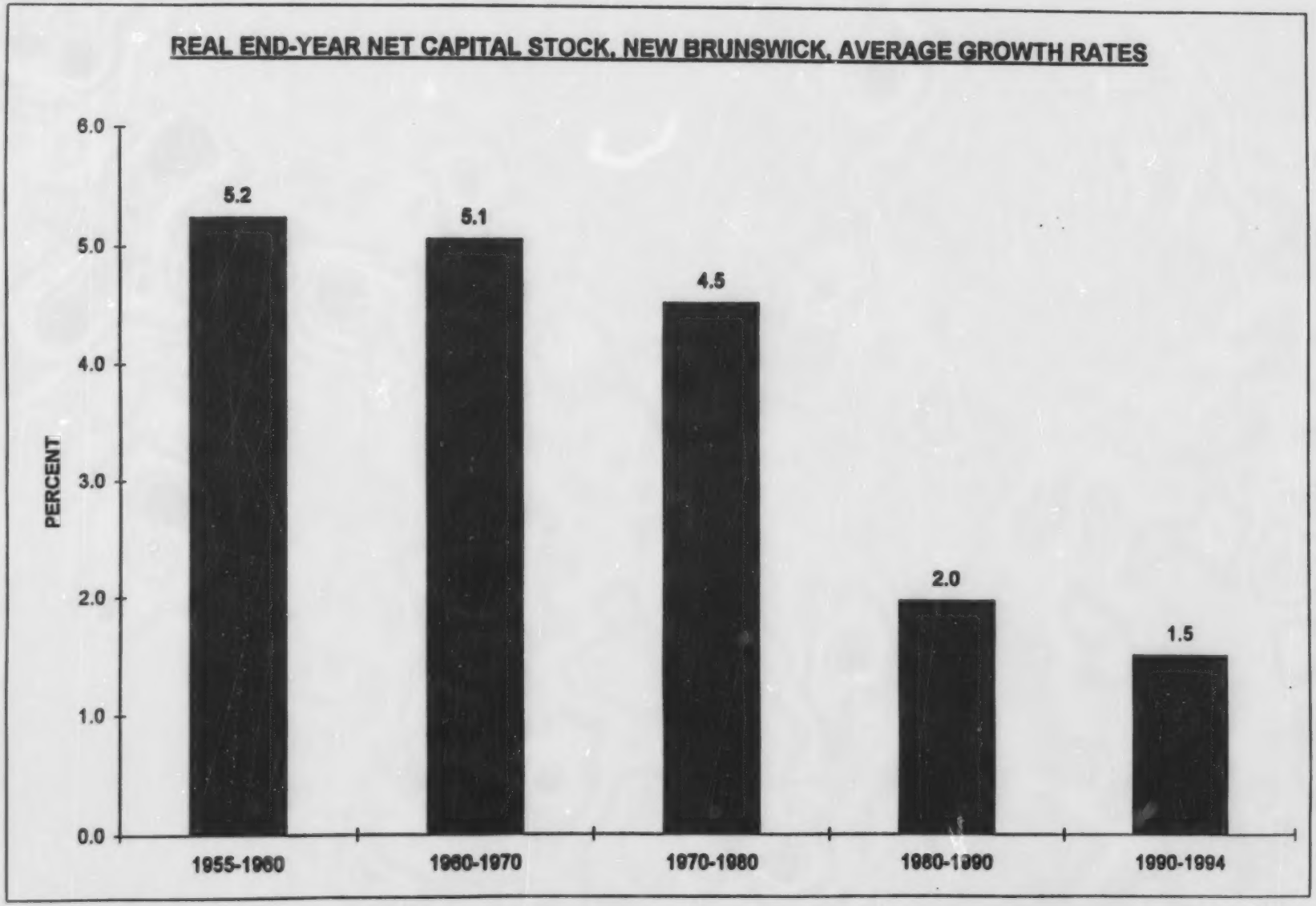
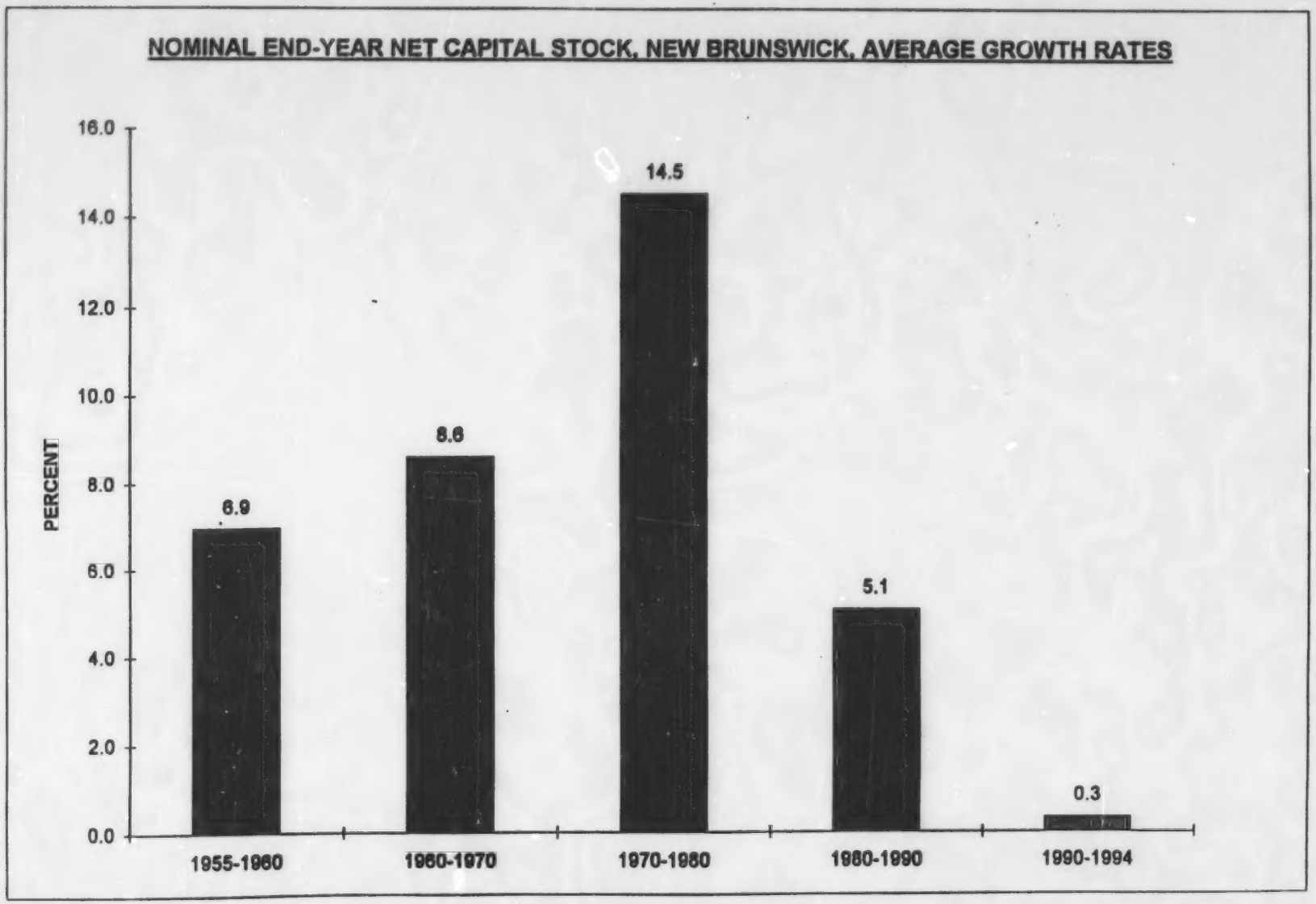

REAL END-YEAR NET CAPITAL STOCK, NEW BRUNSWICK, AVERAGE GROWTH RATES
PERCENT
6.0
5.0
4.0
3.0
2.0
1.0
0.0
5.2
5.1
4.5
2.0
1.5
1955-1960
1960-1970
1970-1980
1980-1990
1990-1994

NSTOCK



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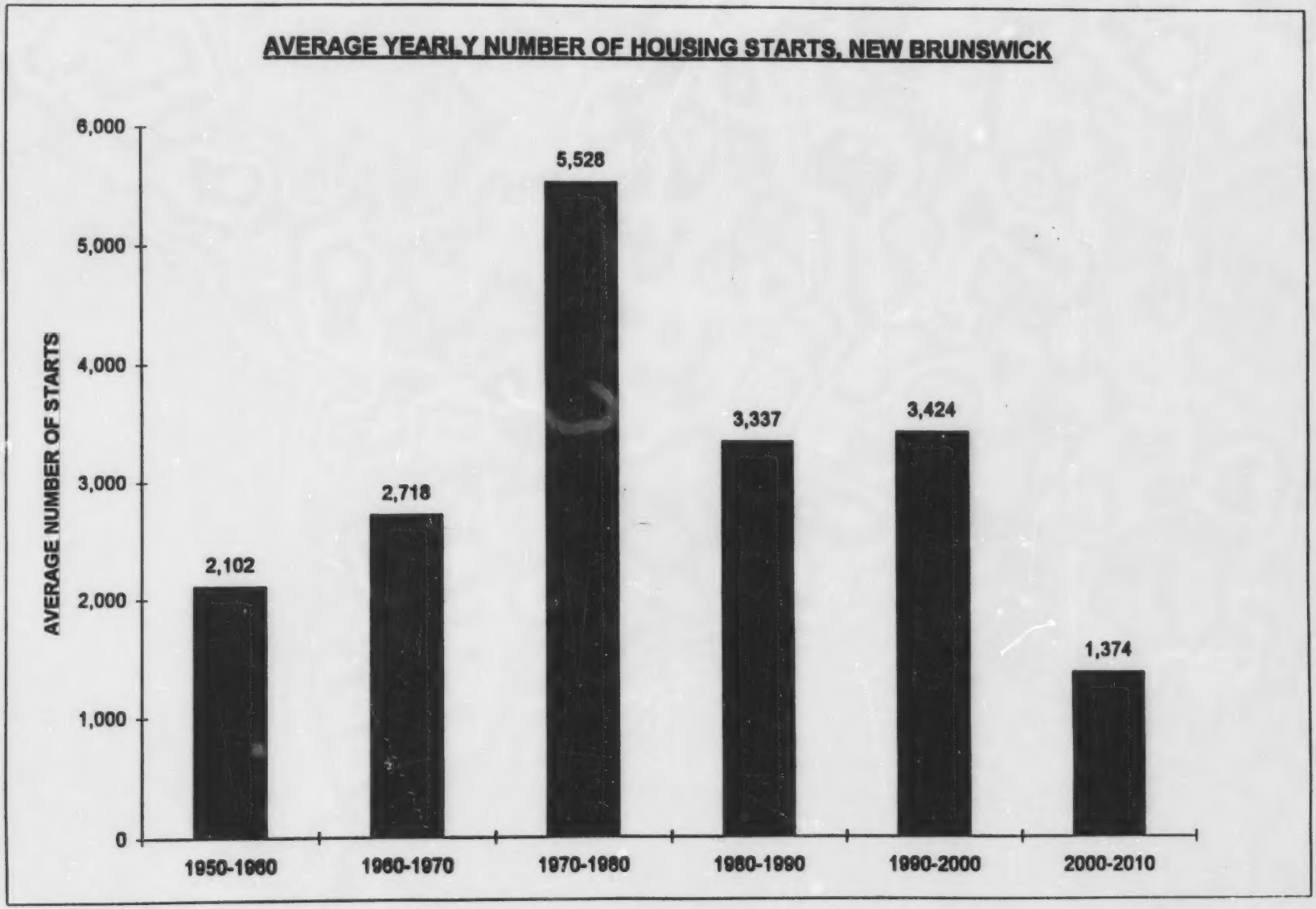
STARTNB



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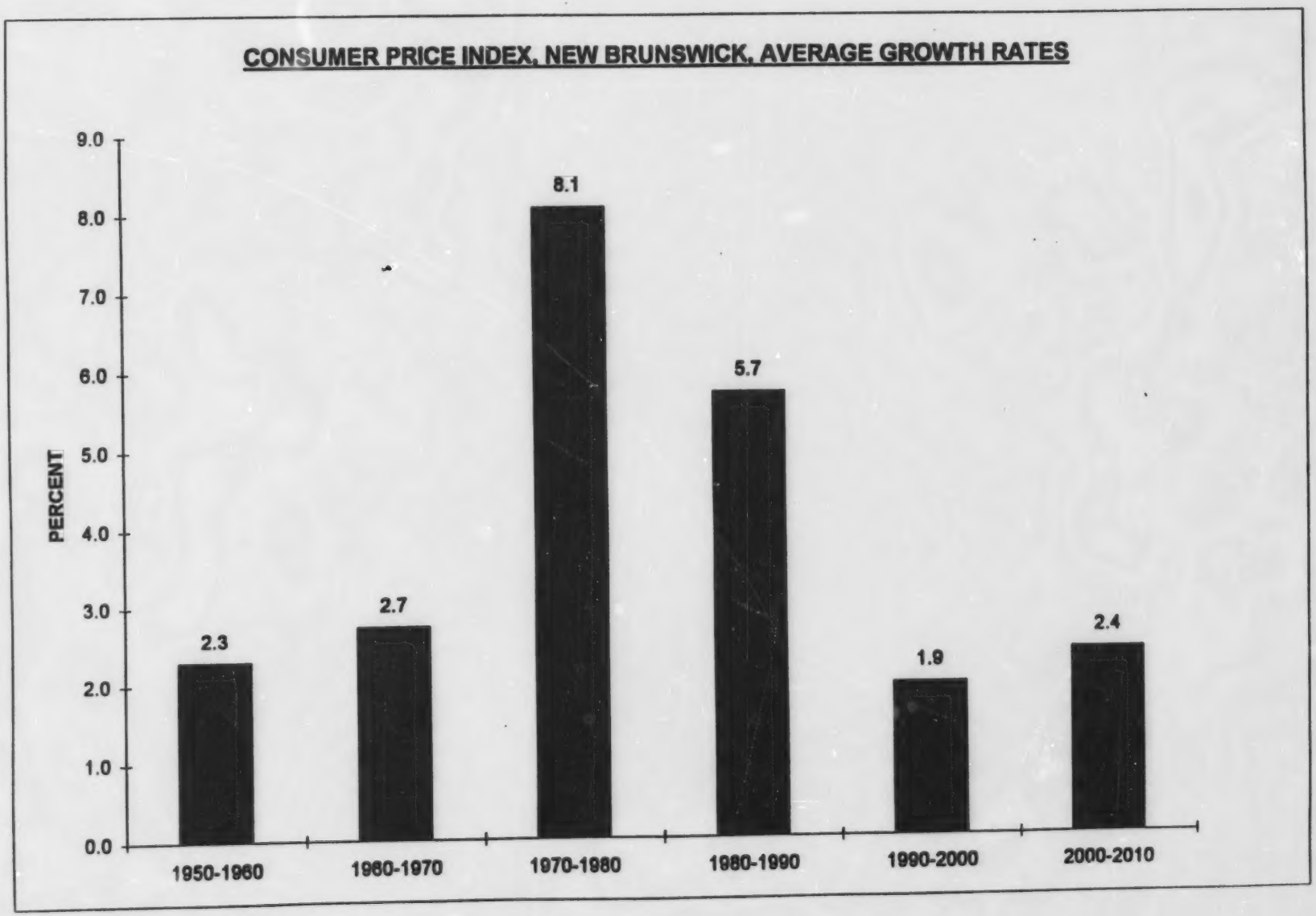

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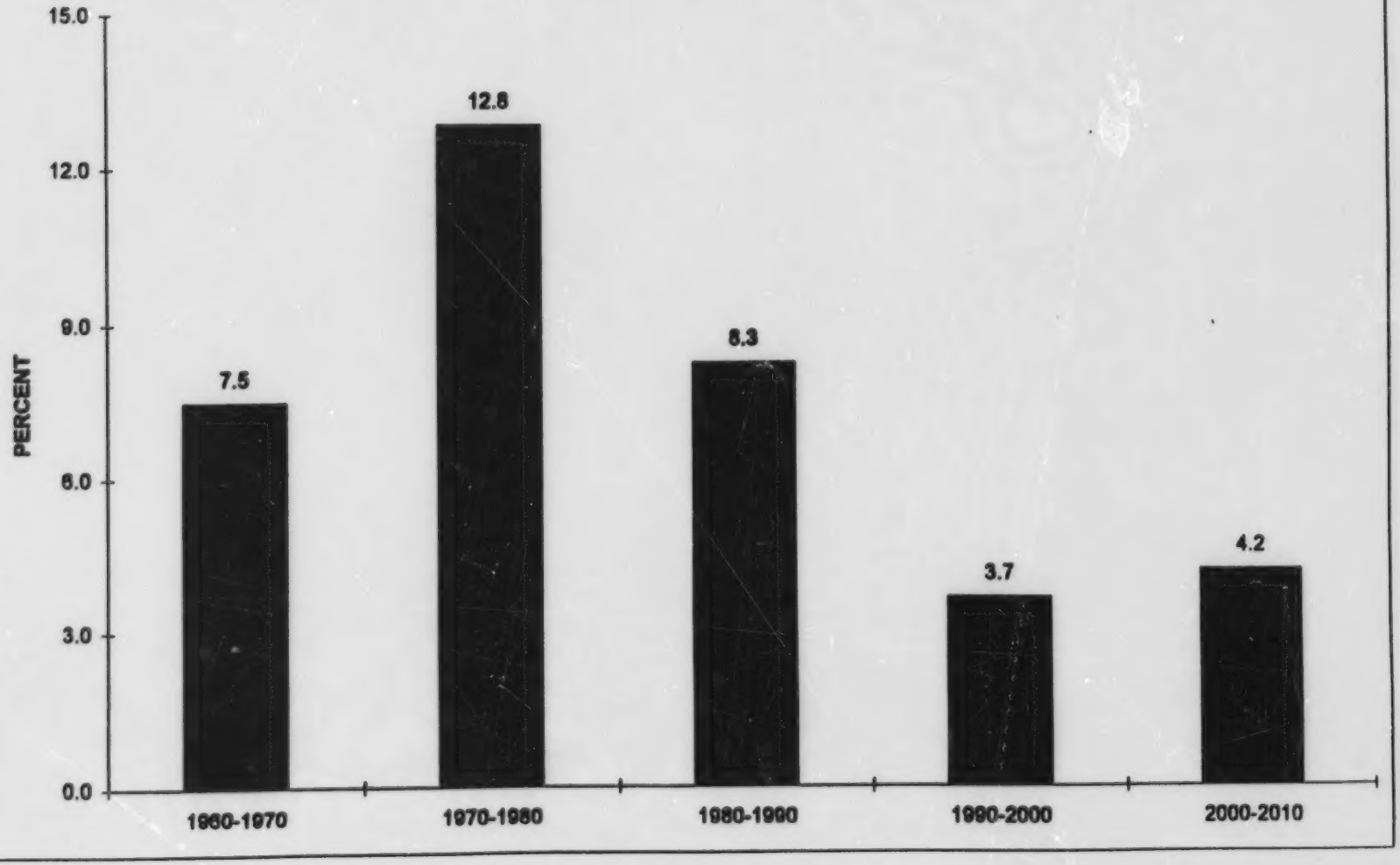
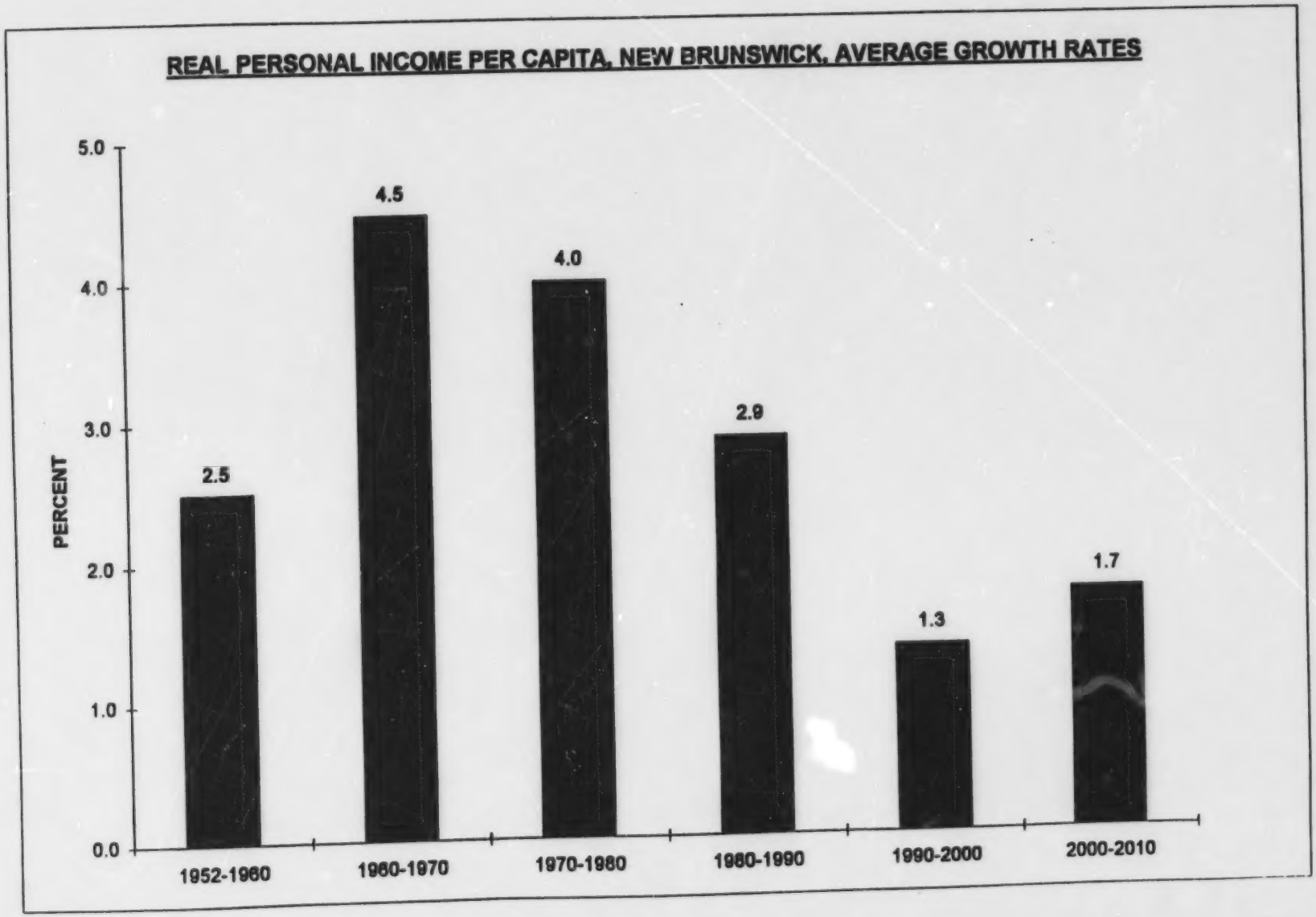
PERSONAL CONSUMPTION, NEW BRUNSWICK, AVERAGE GROWTH RATES



RPICAP



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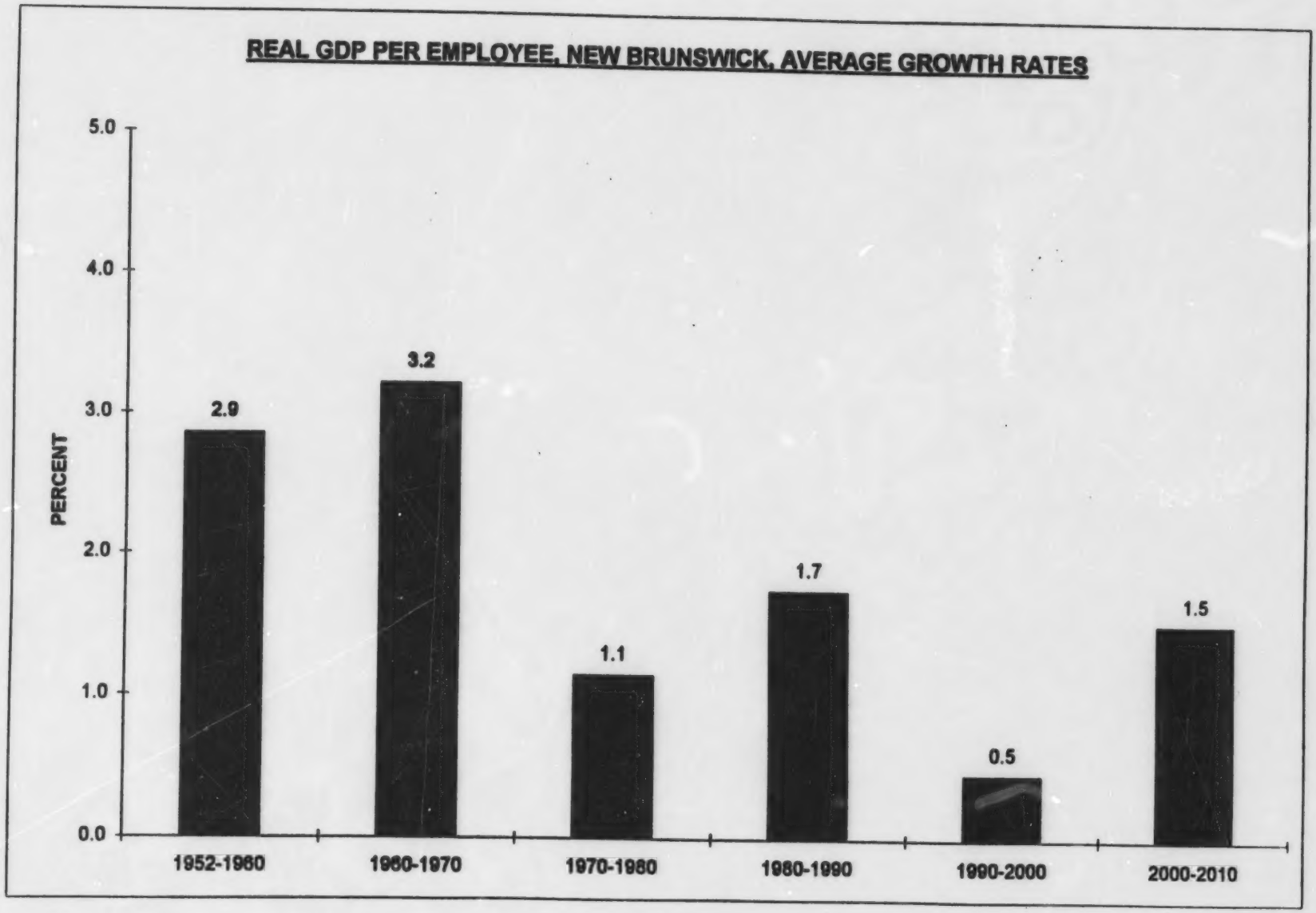
GDPEMP



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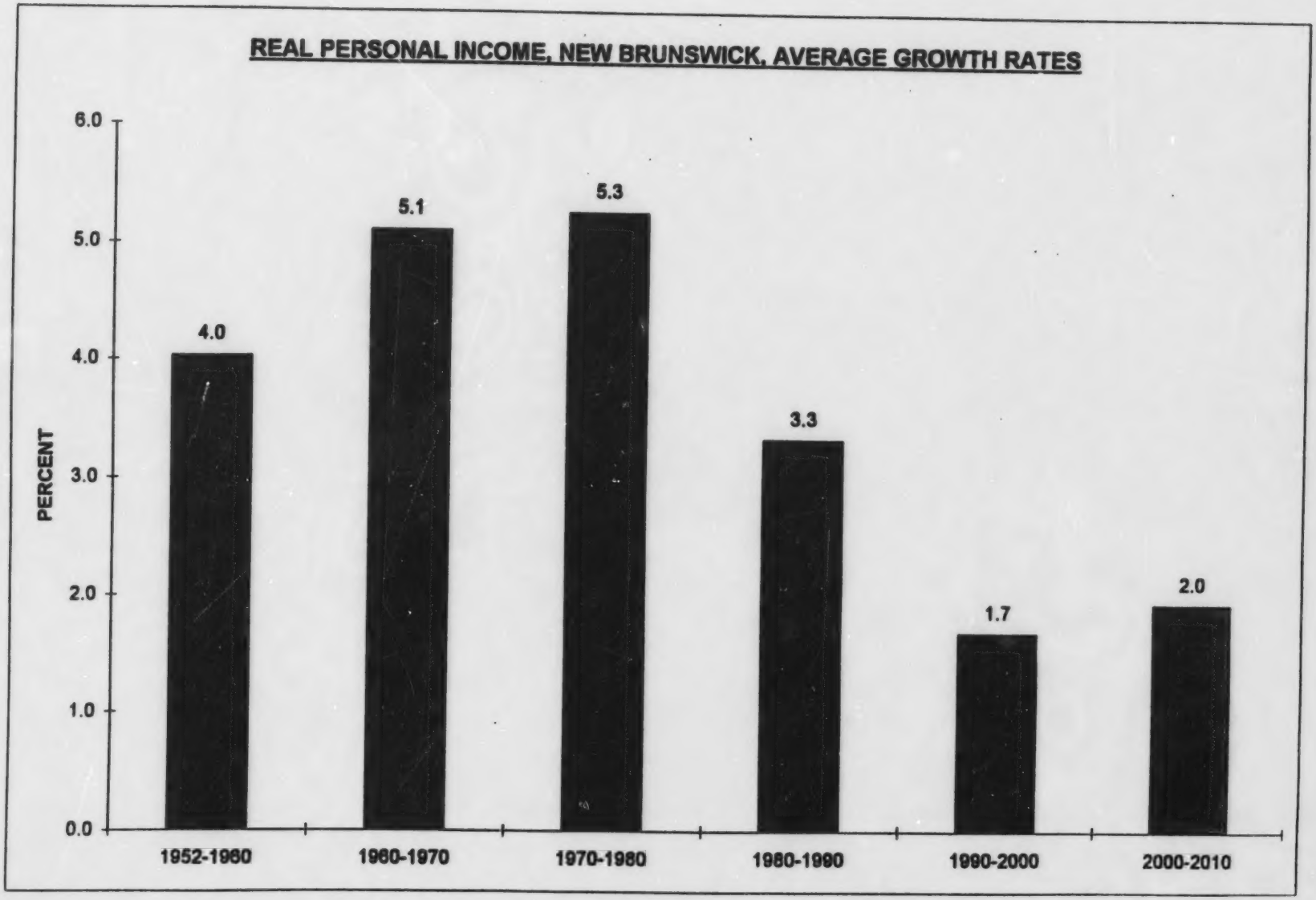

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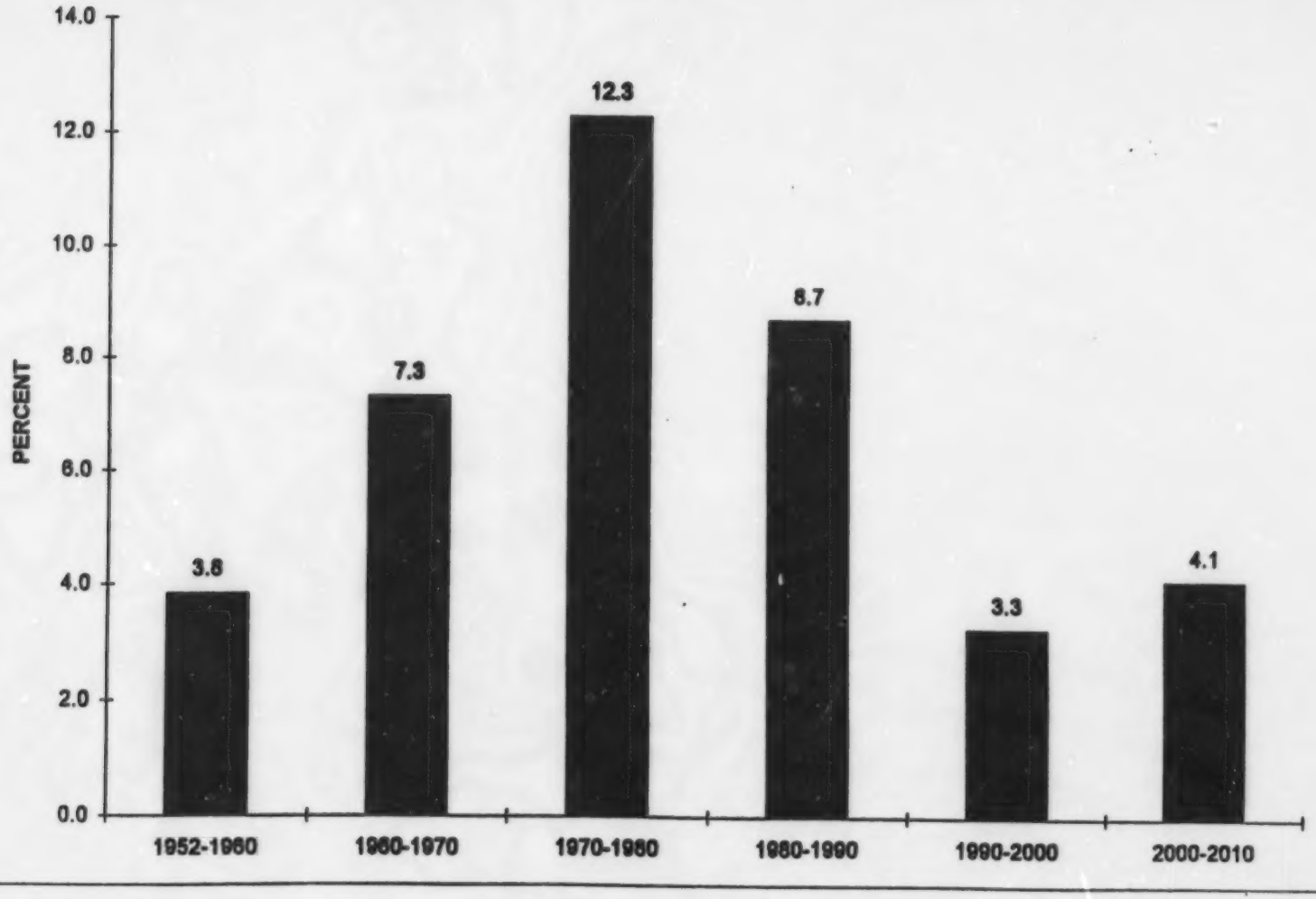
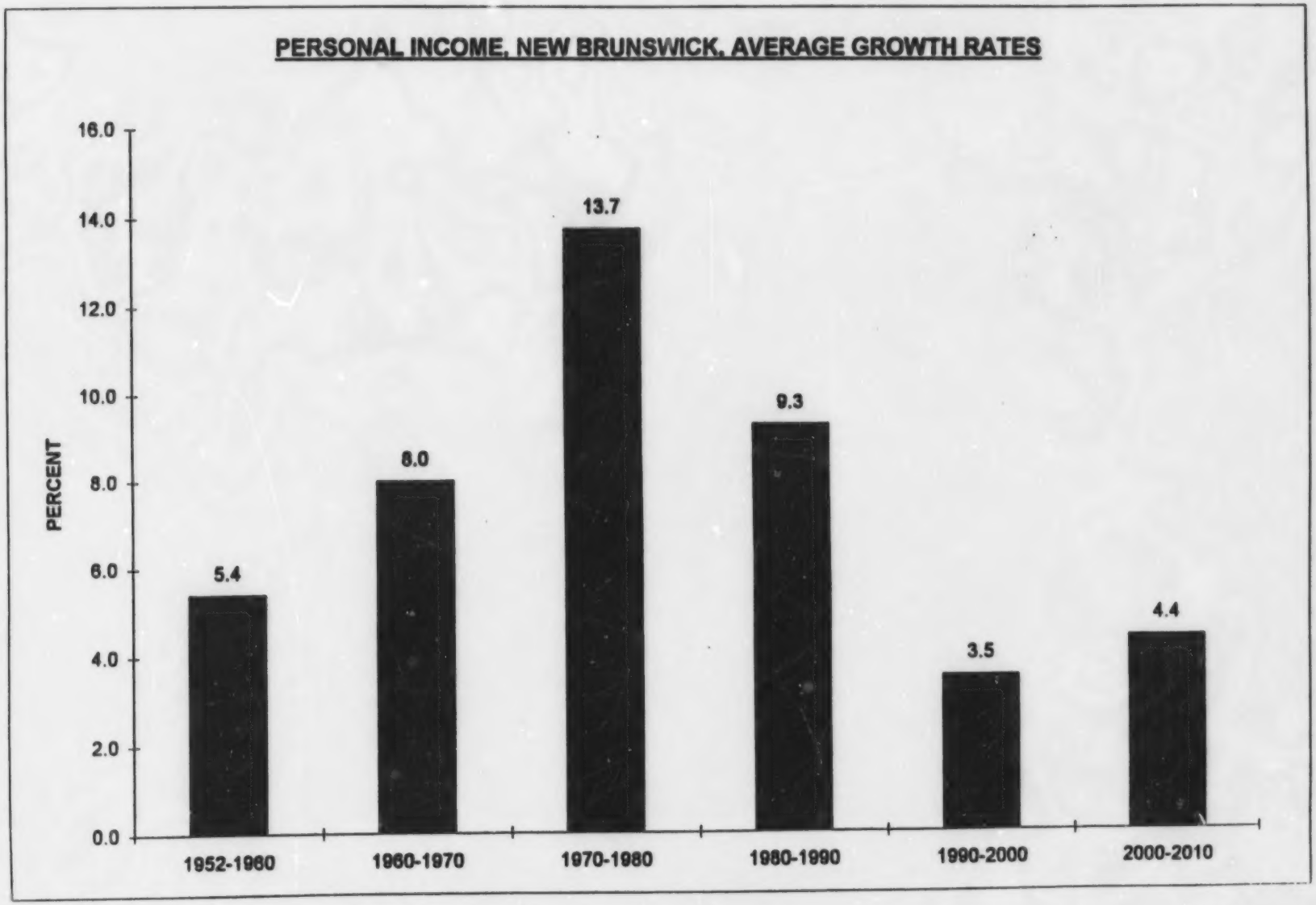
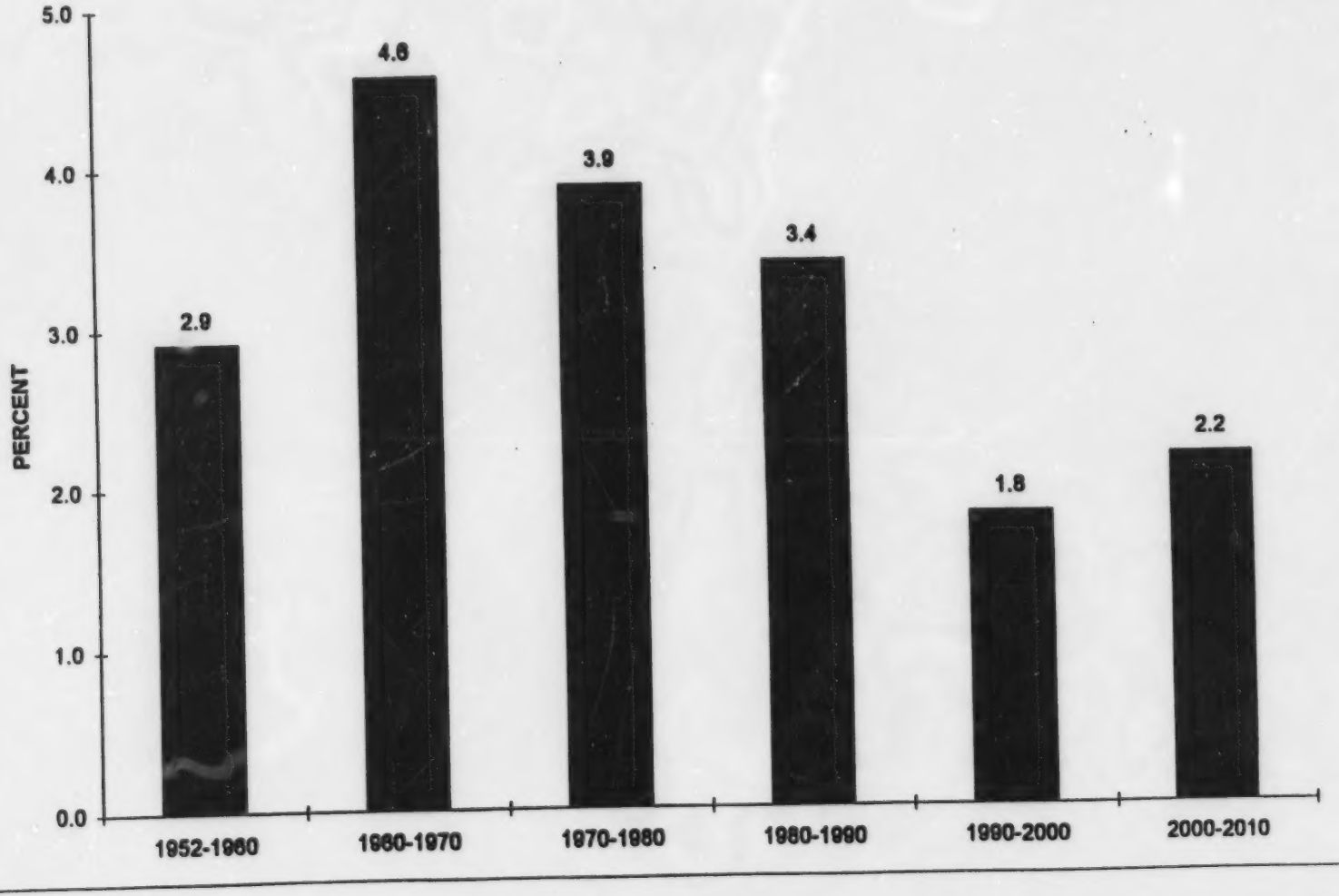
PERSONAL INCOME PER CAPITA, NEW BRUNSWICK, AVERAGE GROWTH RATES

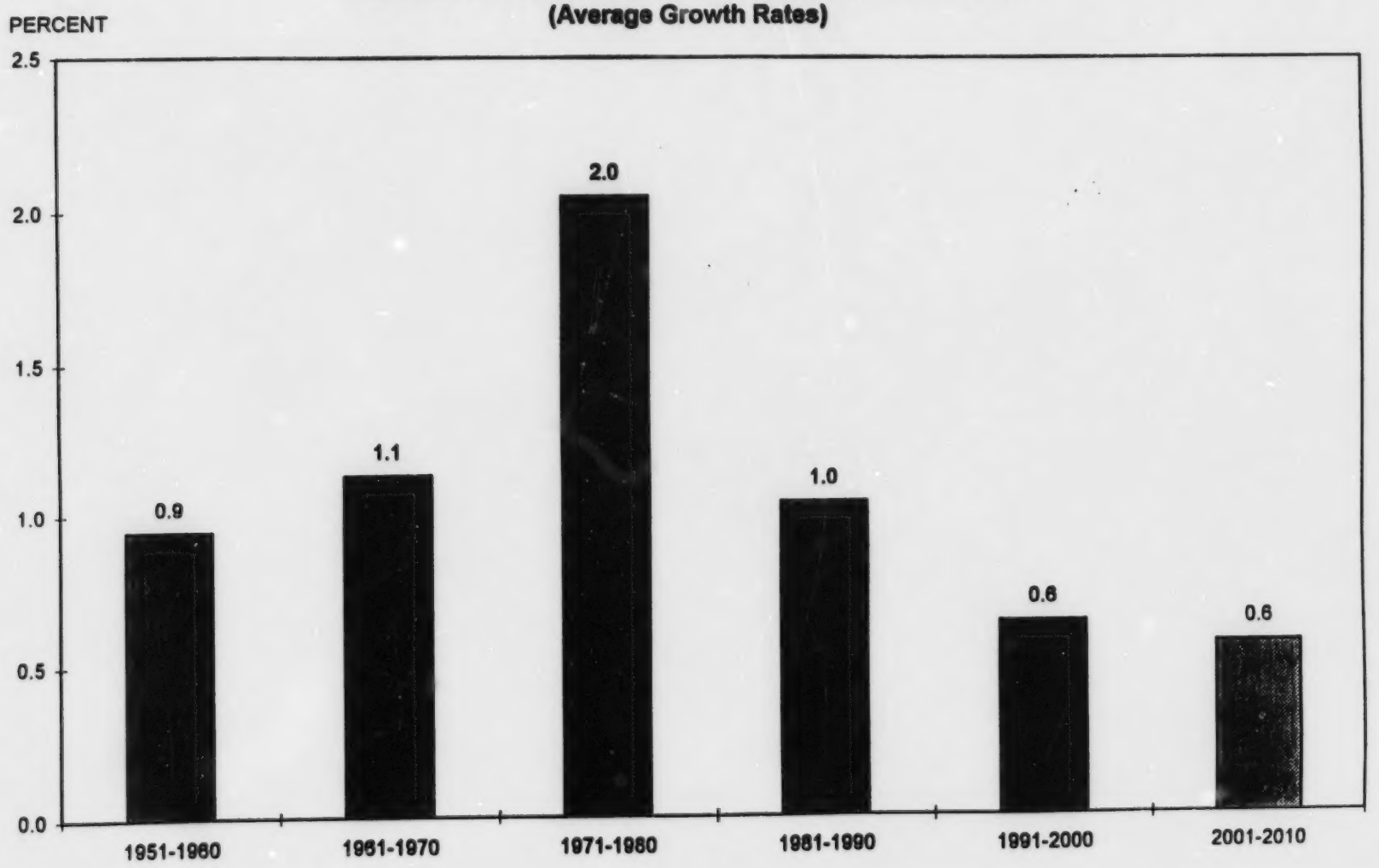



PERSONAL INCOME, NEW BRUNSWICK, AVERAGE GROWTH RATES
PERCENT
16.0
14.0
12.0
10.0
8.0
6.0
4.0
2.0
0.0
5.4
8.0
13.7
9.3
3.5
4.4
1952-1960
1960-1970
1970-1980
1980-1990
1990-2000
2000-2010

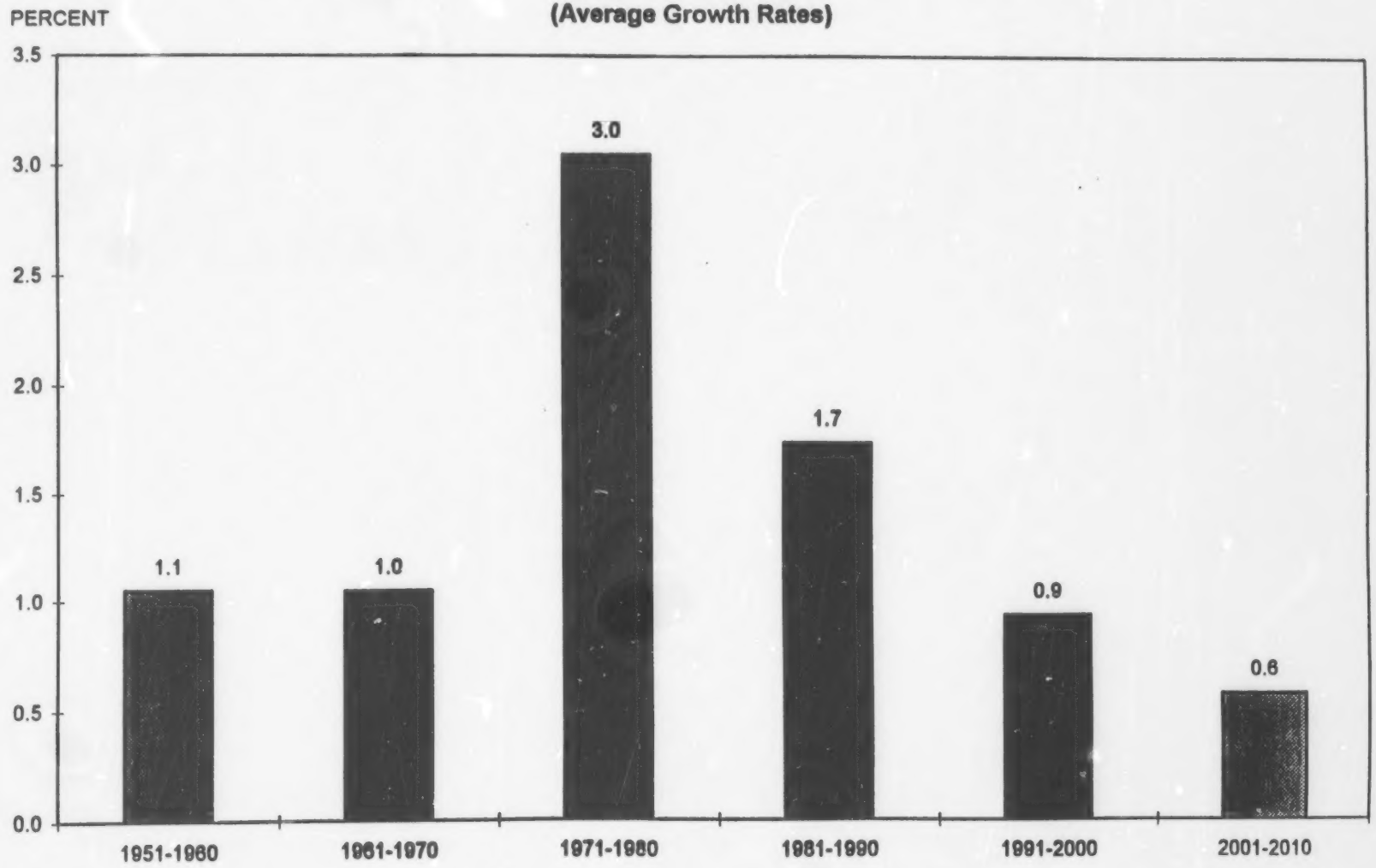
REAL GROSS DOMESTIC PRODUCT, NEW BRUNSWICK, AVERAGE GROWTH RATES



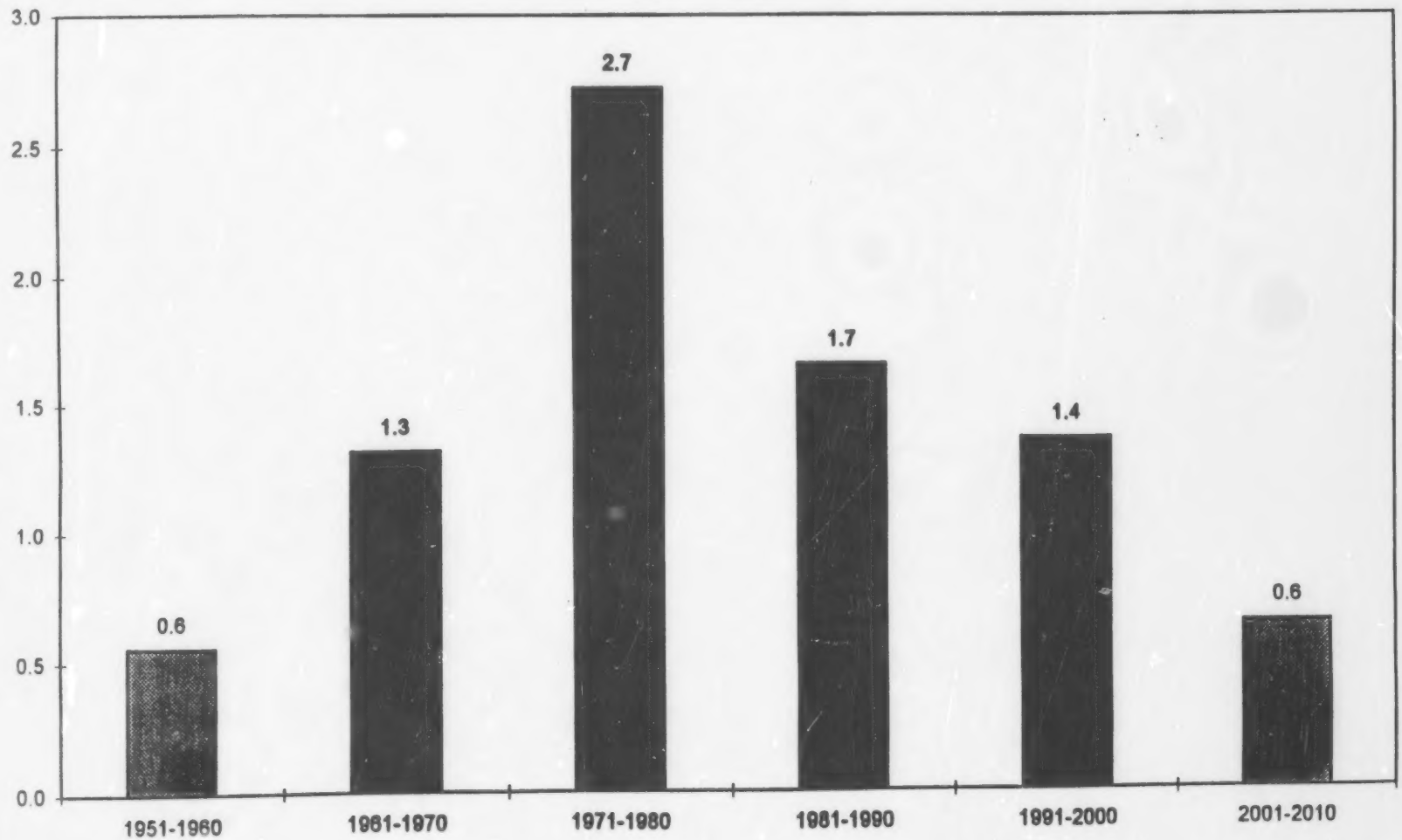
LABOUR FORCE POPULATION 15 YEARS AND OVER, N.B.
(Average Growth Rates)



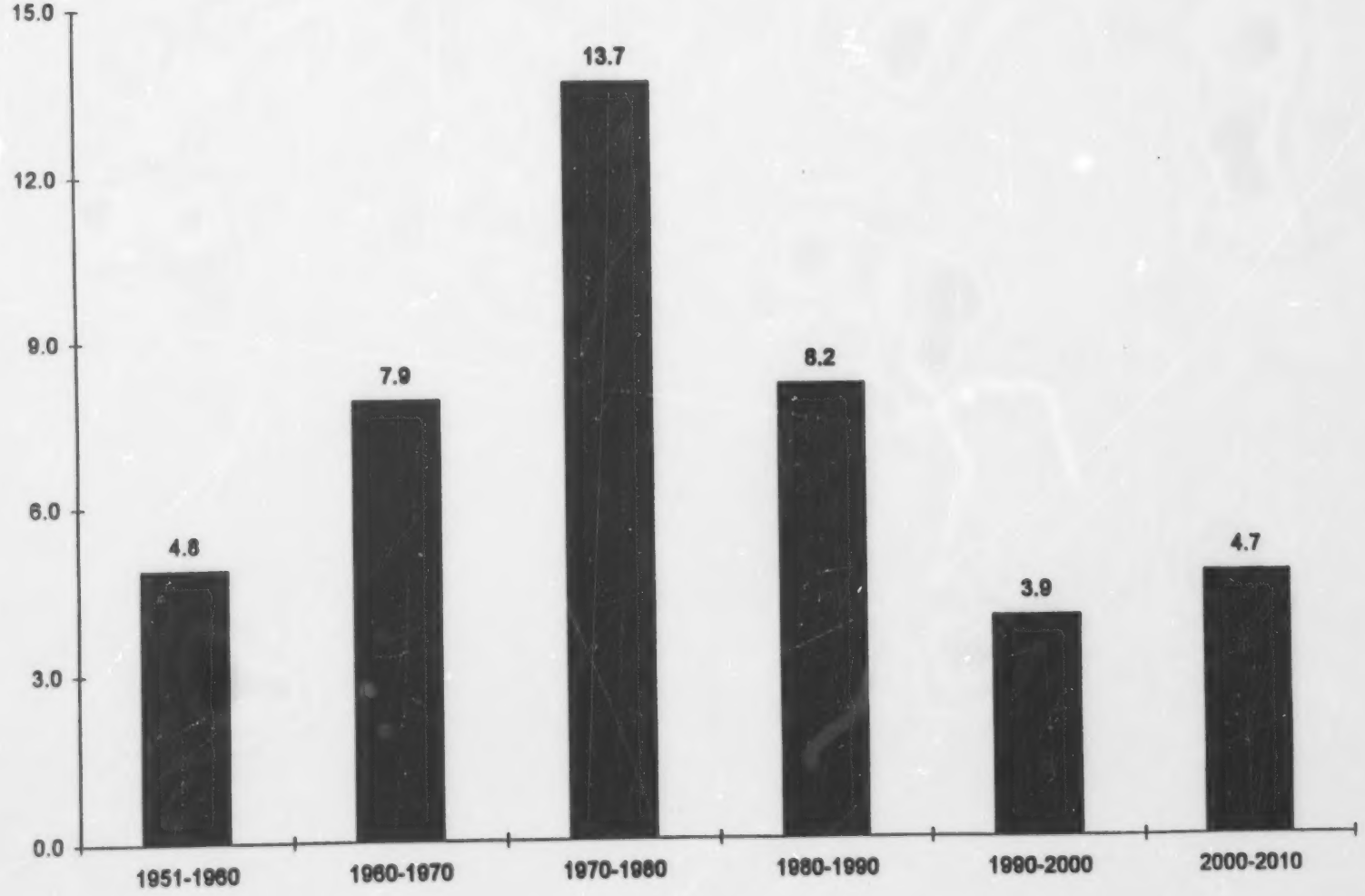
LABOUR FORCE, N.B.
(Average Growth Rates)



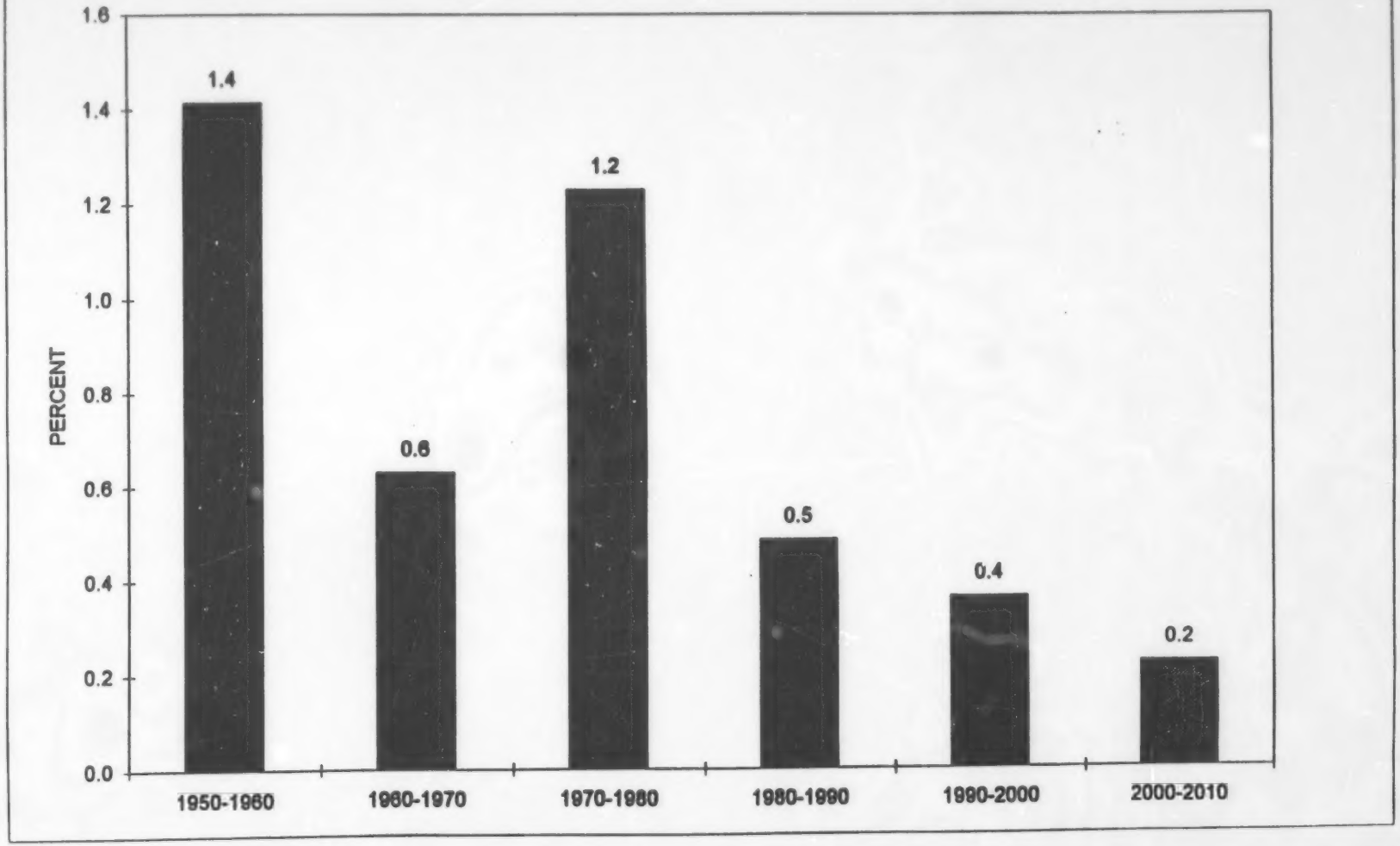
EMPLOYMENT, N.B.
(Average Growth Rates)



GROSS DOMESTIC PRODUCT AT FACTOR COST, NEW BRUNSWICK, AVERAGE GROWTH RATES



POPULATION, NEW BRUNSWICK, AVERAGE GROWTH RATES



GROWTH RATES IN NEW BRUNSWICK ECONOMIC INDICATORS						
INDICATOR	1950-1960	1960-1970	1970-1980	1980-1990	1990-2000	2000-2010
Total Population	1.4	0.6	1.2	0.5	0.4	0.2
Labour Force Population	0.9	1.1	2.0	1.0	0.6	0.6
Labour Force	1.1	1.0	3.0	1.7	0.9	0.8
Employment	0.6	1.3	2.7	1.7	1.4	0.8
GDP ($ current)	4.8	7.9	13.7	8.2	3.9	4.7
GDP ($ constant)	2.9	4.6	3.9	3.4	1.8	2.2
Personal Income	5.4	8.0	13.7	9.3	3.5	4.4
Personal Income per capita	3.8	7.3	12.3	8.7	3.3	4.1
Real Personal Income	4.0	5.1	5.3	3.3	1.7	2.0
Real GDP per employee	2.9	3.2	1.1	1.7	0.5	1.5
Real Personal Income per capita	2.5	4.5	4.0	2.9	1.3	1.7
Personal Consumption	n.a.	7.5	12.8	8.3	3.7	4.2
Consumer Price Index	2.3	2.7	8.1	5.7	1.9	2.4
Housing Starts (Yearly Average)	2,102	2,718	5,528	3,337	3,424	1,374
Capital Stock ($ current)*	6.9	8.6	14.5	5.1	0.3	
Capital Stock ($ constant)*	5.2	5.1	4.5	2.0	1.5	
Capital Stock per employee ($ constant)*	2.9	3.7	1.4	0.4	1.1	
Capital Stock per $ of Output ($ constant)*	$2.12	$1.99	$2.06	$2.02	$2.04	
* Capital stock data is only available to 1994.						

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April, 1996

NEW BRUNSWICK
AT THE DAWN OF A NEW CENTURY

A WORKING PAPER ON

DEMOGRAPHIC ISSUES AFFECTING NEW BRUNSWICK

VOLUME III
FAMILY AND NON-FAMILY HOUSEHOLDS AND THEIR HOUSING CHOICES

New Nouveau Brunswick

April, 1996

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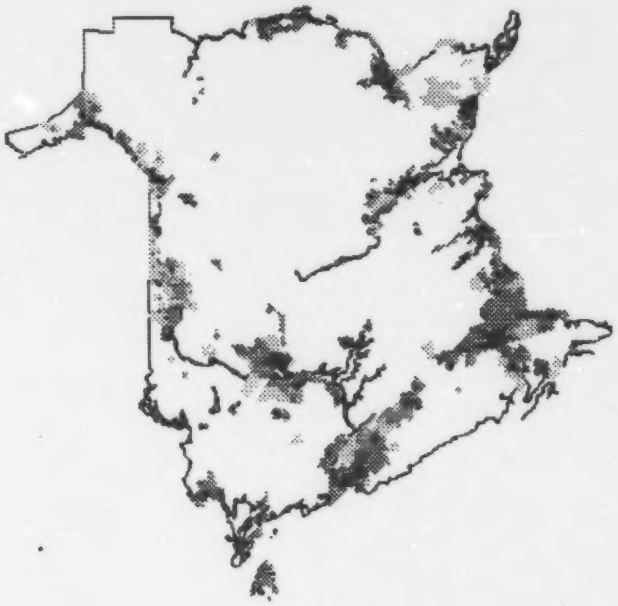

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H

Household formation and housing choice are tied to a variety of socio-economic factors not the least of which are demographic factors and life-cycle stages. As people move through the various stages of life, and as their social and economic circumstances change, their living arrangements alter with corresponding changes in their housing preferences. As people age, they mature, and generally leave home to start their own families or live in other non-family types of households. As social and economic circumstances dictate or allow, they marry or do not marry, have children or remain childless, separate, divorce, become lone-parents or empty-nesters, live as senior married couples, widows or widowers, etc. All of these life-cycle stages, coupled with their economic circumstances, influence their housing choices throughout their life. In order to visualise the impact demographic change may have on potential household/housing situations of the future, it is necessary to identify the trends of the recent past and those underlying demographic factors which have influenced the choices of past and current populations.

In the sections which follow, recent trends in rates of household formation and housing choices are examined and projections are made to 2011. The trend analysis for the period 1971 to 1991 has been based upon Census data; the projections to 2011 are based upon population projections produced by the Statistics Agency using Postcensal Estimates of Population. The reader is cautioned that these projections are based on projected headship rates which have not been adjusted for projected changes in income levels, employment levels, etc. All of these factors influence households formation and housing demand. As such, it will be necessary to monitor changes in headship rates over the coming years and subsequently, to revise these projections as additional information becomes available.

The projections of *Family* and *Non-Family* households have been undertaken using *the Potential Housing Demand Model, Version 1.2* (PHD) which was developed by Canada Mortgage and Housing Corporation in 1989 and which has undergone a number of revisions and refinements since that time. The model allows us to project the number of households to be formed, the type of households which will likely be formed and the tenure choices these households are most likely to make. The model is reasonably flexible and allows for the incorporation of the population projections developed by the Statistics Agency. Further information on the workings of this model are included in the *Explanatory Notes* included at the end of this section.

Households

Statistics Canada defines a household as a person or a group of persons (other than temporary or foreign residents) who occupy a dwelling. The growth in the number of households is the single greatest factor influencing growth in the demand for housing. According to Census data, the number of households in New Brunswick increased 61% during the twenty year period between 1971 and 1991. The population of New Brunswick only grew by 9.7% during this same period. The rate of growth was most rapid during the 1971-81 decade (36%) compared to the 1981-91 decade (18%). Average household size fell from 4.03 persons per household in 1971 to 2.85 persons per household in 1991.

The rapid growth in the number of households can be partially explained by demographic change. During the 1971 to 1991 period, the baby boomers, who were born during the 1947 - 1966 period, entered that stage of their lives where one leaves home and forms another household. Other explanations have been suggested for the strong rate of household growth and decreasing household size, including: declining fertility rates, increasing divorce rates, declining marriage rates coupled with postponement of first marriages, increasing labour force participation by women, a greater demand for privacy, and increasing affluence.

A. Households by Type

Households are generally categorised into two main groups - *Family* households and *Non-Family* households. Under the Census, a *Family* household is defined as *"a household that contains at least one census family, that is a married couple with or without never-married sons or daughters, or a couple living common-law with or without never-married sons or daughters, or a lone parent living with one or more never-married sons or daughters (single-parent family)."* A *Non-Family* household refers *to "either one person living alone in a private dwelling or to a group of two or more people who share a private dwelling, but who do not constitute a census family."* A *One-family* household refers to *" a single census family (with or without other non-family persons)* that occupies a private dwelling. *Multiple-family* household refers to one in which *"two or more census families (with or without additional non-family persons)* occupy the same private dwelling.

The following chart shows the growth of *Family* and *Non-Family* households over the 1971 to 1991 period. The most dramatic change over the period occurred in the *Non-Family* household category, which grew from 15% of total households in 1971 to 23% of all households in 1991. In numbers, they grew by 80% during the 1971-81 decade and 40% during the 1981-91 period, for an overall rate of growth of 152%. *Family* households grew by 61% during the same time frame. The growth in the *Non-Family* household category has been attributed, in part to the increase in the divorce rate, the decline in the marriage rate, the postponement of first marriages and the increasing participation rate of women in the labour force.

Table 1

Households by Type, NB, 1971-91			
Year	Total	Family	Non-Family
1971	157635	134565	23070
1976	190435	158200	32230
1981	214915	173390	41525
1986	231680	183845	47840
1991	253705	195470	58240
	(Percent of All Households)		
1971	100.0%	85.4%	14.6%
1991	100.0%	77.0%	23.0%
	(Growth)		
1971-1981	36.3%	28.9%	80.0%
1981-1991	18.0%	12.7%	40.3%
1971-1991	60.9%	45.3%	152.4%

Figure 1

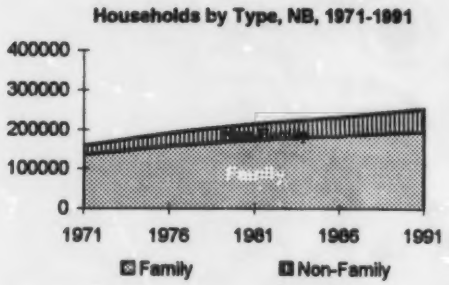
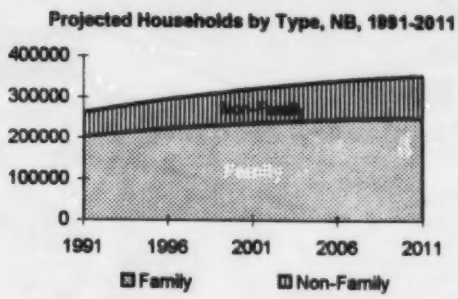


Figure 2



It is projected that the total number of households in New Brunswick could increase by nearly 95,000 households (36%) during the period from 1991 to 2011. The rates of growth will not be as dramatic over this twenty year period as was experienced over the 1971 to 1991 time frame (growth rate of 61%), as the baby boomers will have moved through the major household formation stages of their life cycles.

Projections of historical trends related to the breakdown between *Family* and *Non-Family* households indicate that, if these trends continue, *Family* households will continue to decline as a percentage of total households such that they represent only 71% of total households at the end of that time period. Conversely, *Non-Family* household will continue to increase in their proportional share from 23% in 1991 to 29% by 2011.

Family Households

As noted above, *Family* households grew at a slower rate than *Non-Family* households over the 20 year period between 1971 and 1991. However, when *Family* households were examined by type of household, differing rates of growth within the overall *Family* category were clearly evident.

Table 2

Year	Family Households				
	Total Family	Couples only	Couples with children	Lone Parents	Multiple Family
1971	134565	33195	84800	11560	5005
1976	158200	44160	98040	14250	3750
1981	173390	46480	104160	19640	3115
1986	183845	50650	107190	22995	3015
1991	195470	61065	106680	25205	2520
	(Percent of Family Households)				
1971	100.0%	24.7%	63.0%	8.6%	3.7%
1976	100.0%	27.9%	60.7%	9.0%	2.4%
1981	100.0%	26.8%	60.1%	11.3%	1.8%
1986	100.0%	27.6%	58.3%	12.5%	1.6%
1991	100.0%	31.2%	54.6%	12.9%	1.3%
	(Growth)				
1971-81	28.9%	40.0%	22.8%	69.9%	-37.8%
1981-91	12.7%	31.4%	2.4%	28.3%	-19.1%
1971-91	45.3%	84.0%	25.8%	118.0%	-49.7%

Figure 3

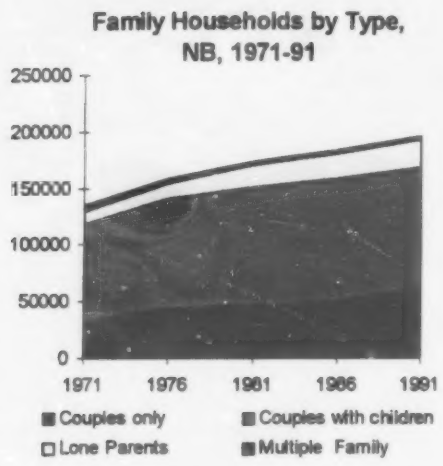
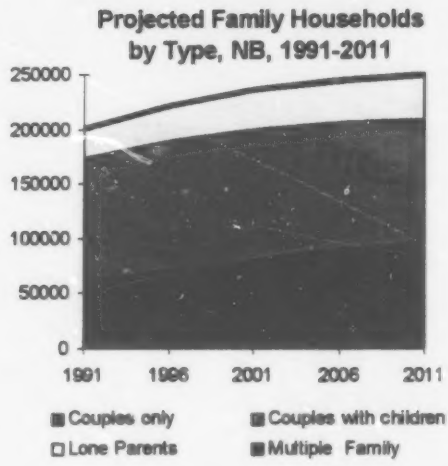


Figure 4



Couples With Children

Couples with Children households experienced a decline in their share of total *Family* households during the two decades between 1971 and 1991. Households comprised of couples with children present grew by only 23% during the 1971-81 decade compared to total family household growth of 29%. During the 1981-91 decade, the growth of the *Couples with Children* category grew by only 2%, experiencing a decline in absolute numbers during the last half of the decade.

Table 3
Couples with Children Households

Age Group	1971	1981	1991
15-24	4835	4320	2090
25-44	46300	63555	67700
45-64	30830	31615	31655
65+	2825	4670	4960
Total	84800	104160	106680

The projections of *Family* households by type are based upon the premise that there will be a continuation of the decline of *Couples with Children* households as a proportion of the total *Family* household category. By 2011, if the trends evident over the period between 1971 and 1991 continue, *Couples with Children* households will represent only 44% of all *Family* households compared to 55% in 1991. By 2001, their numbers are anticipated to decline in absolute terms such that the rate of growth over the period between 1991 and 2011 is only slightly more than 1%.

When the data for *Couples with Children* were examined by the age of the head of the household for the twenty year period from 1971 to 1991, it was seen that the concentration of couple households with children present were, as was expected, in the age group 25-44. The influence of the rate of growth of this age group - the baby boomers - is evident in all categories. The proportion of the total *Couples with Children* households in this age group grew steadily over the two decades, increasing from 55% of total *Couple with Children* households in 1971 to 64% by 1991. The younger age group, 15-24, lost in proportionate share (from 6% to 2%), as did the 45 - 64 year age group (down from 36% to 30%). These changes were determined to be due, in part, to the decisions of youth to postpone having children, and the ability of older children to afford to leave their family home to establish their own households.

Figure 5

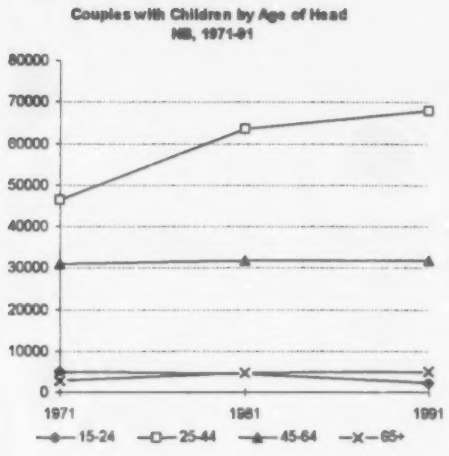
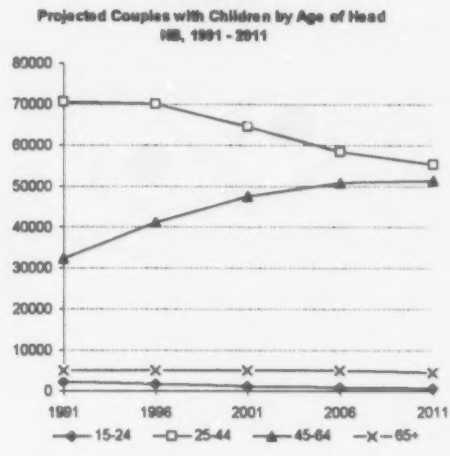


Figure 6



As can be seen in the preceding chart, the projections of *Couples with Children* households indicate that the distributional pattern of the category by age group is anticipated to change over the twenty year period between 1991 and 2011. By 1996, the 25-44 year age group will have started to decline in proportional share such that it reaches 1971 levels by 2001 and declines to 50% of the total number of *Couples with Children* households by 2011. The number of households in the 25-44 year age group is projected to decline by 22% over the period from 1991 to 2011. This is due, in part, to the aging of the baby boomers. Many of them will have moved into the "empty nest" stage as their children reach young adulthood, or have migrated to the 45-64 year age group within the *Couples with Children* category, which is expected to increase by 60% over the period.

The number of *Couples with Children* in the 15-24 year age group is also projected to continue to decline (-77%, 1991-2011). While the number senior couple households with children increased over the 1971 to 1991 period, it is anticipated to decline slightly in both proportionate share and in absolute numbers during the 1991 to 2011 period.

Couples Without Children

Couples Without Children households grew by 84% over the 1971 to 1991 period, second in growth rate only to *Lone Parent* headed households. When examined on the basis of age groups, it is evident that the growth in the category occurred in the age group 25-44 which grew from 5,055 households in 1971 to 15,820 households by 1991 (an increase of 213%).

The 15-24 year age group showed an increase of 48% during the 1971 to 1981 period (possibly reflective of decisions to defer having children even though they married or lived common-law). The numbers dropped however during the last half of the period such that a decline to pre-1971 levels (-34%) was evident. It is felt this is reflective of a move to defer marriage by this age group.

Table 4

Couples Without Children Households			
Age Group	1971	1981	1991
15-24	3200	4730	3145
25-44	5055	10485	15820
45-64	12570	15225	21145
65+	12360	18035	20955
Total	33195	48480	61065

Figure 7

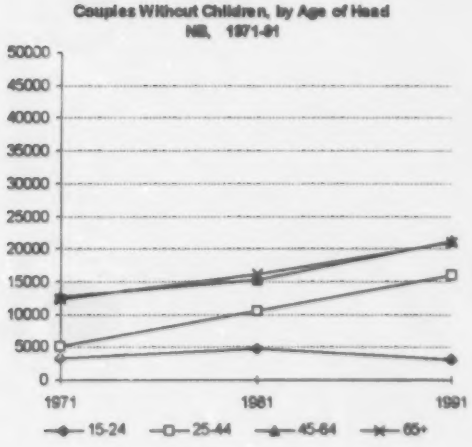
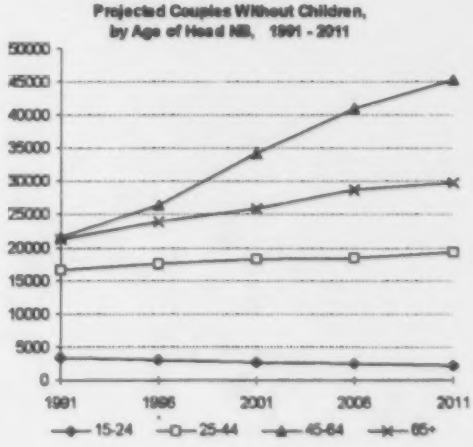


Figure 8



The total number of *Couples without Children,* as can be seen in Figure 4, is projected to increase by 25% over the period 1991 to 2011. The category's proportional share of total *Family* Households is expected to continue to increase such that it reached 38% of all *Family* households by that date compared to 31% in 1991 and 25% in 1971.

Projections by the age of the head of the household indicate that the number of *Couples without Children* households where the head is aged 15-24 will decline by 37% over the twenty year period to 2011, accounting for only 2% of all *Couples without Children* households. Those where the head is aged 25-44 are anticipated to increase by only 16% over the period, while those aged 45-64 are expected to increase by 110%, due in the main to the aging of the baby boomers, as noted earlier. The number of elderly *Couples without Children* households is projected to increase by 40%, not as a result of the aging of the baby boomers (who have not yet entered this category), but due in part to increased life expectancy, especially of males.

Lone Parent Households

During the twenty year period between 1971 and 1991, the largest rates of overall growth within the *Family* household group were experienced within the *Lone Parent* household category. Households headed by a lone parent accounted for less than 9% of all *Family* households in 1971 while in 1991 they accounted for nearly 13%. The actual number of *Lone Parent* households more than doubled over the two decades, increasing from 11,565 to 25,205 (118%). It is projected that, by 2011, *Lone Parent* headed families will grow by 68% over 1991 levels, representing nearly 16% of total *Family* households.

Historically, the bulk of the increase over the twenty year period between 1971 and 1991 occurred in the 25-44 year age group which increased by 287% (from 29% of total *Lone Parent* households in 1971 to 52% in 1991). The number of *Lone Parent* households with the head of household aged between 15 and 24 increased sharply between 1971 and 1981, then reduced slightly between 1981 and 1991. The increase (from 390 households in 1971 to 1,775 households by 1981) could be due, in part, to support program changes which made it more feasible financially for lone parents living in multiple family arrangements (with their parents) to live independently. The reduction between 1981 and 1991 could be partially explained by reductions in or deferral of marriage and subsequently, divorce in this age group.

Table 5

Lone Parent Households

Age Group	1971	1981	1991
15-24	390	1775	1735
25-44	3360	8395	13000
45-64	4785	6820	6840
65+	3020	2630	3620
Total	11565	19640	25205

As can be seen in Figure 4, *Lone Parent Families* are anticipated to continue to grow in both absolute terms (by upwards of 13,500 households (52%) between 1991 and 2011) and as a percentage of total *Family Households* (from 13% to 16%). The number of *Lone Parent* headed households in the 15-24 year age group is anticipated to remain relatively constant over the projection period while those in the 25-44, 45-54 and 65+ age groups are anticipated to continue to grow (increases of 47.6%, 78.5% and 43.5% respectively). The rate of growth in the 45-64 year age group will be influenced by the aging of the baby boomers.

Figure 9

Lone Parent Households by Age of Head NB, 1971-91

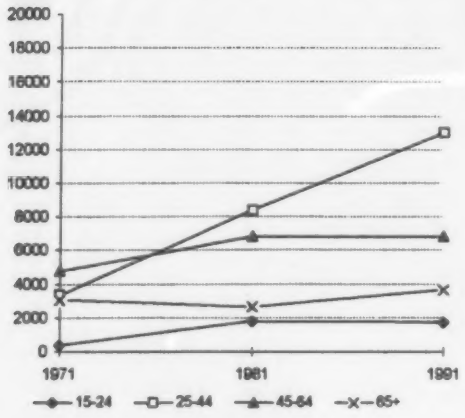
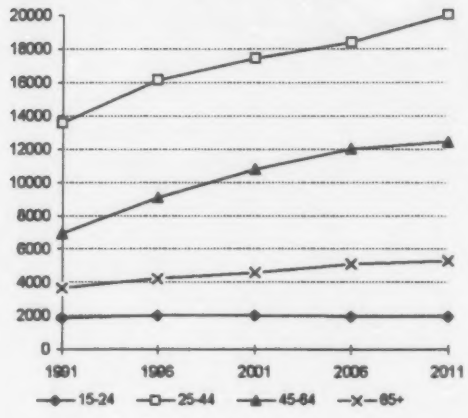


Figure 10

Projected Lone Parent Households by Age of Head NB, 1991 - 2011



Multiple Family Households

Multiple Family households exhibited a continuous decline in absolute numbers in each censal period over the two decades, falling from 4% of total *Family* households in 1971 to 1% of total households in 1991. The PHD model does not project the number of *Multiple Family* households on the basis of trends within the *Multiple Family* category, but as a residual of the calculations of the breakdown of total *Family* households into the *Couples with Children*, *Couples without Children* and *Lone Parent* headed *Family* households. The residual approach indicates that the trend towards the decline in this category's proportionate share of total *Family* households will continue to 1996 (1% of total *Family* Households) and then start to increase over the fifteen year period to a level of 2% by 2011. In absolute terms, this increase is expected to be in the vicinity of 1,500 households (an increase of 53%).

Non-Family Households

NOTE:

The Potential Housing Demand Model projects the number of *Non-Family* households by tenure but does not attempt to disaggregate the *Non-Family* Household category into sub-groups by size or composition of household. Because many current forms of housing assistance and other social program responses are directed towards such households, it was considered important to estimate the potential growth of *Non-Family* by type using a different approach.

The main groups receiving assistance at the present time are low-income senior households (many of which are females living alone), low-income *Couples with Children* households, and low-income *Lone-Parent* households. The model projects the number of *Couples with Children* households, *Lone-Parent* households, and senior *Couples without Children*

households, but does not provide any estimates of the numbers of seniors *One-Person* households which fall into the *Non-Family* category. Census data for the census years between 1971 and 1991 were obtained from CMHC. These allowed for an examination of the *Non-Family* Household category by size of household (*One-Person* households and *Two Or More Person* households), and, for *One-Person* households, by the sex of the household member. The estimates of *Non-Family* households by type have been based upon the assumption that the households within the *Non-Family* category will be distributed in roughly the same proportions through to 2011 as they were in 1991.

Earlier it was noted that *Non-Family* households accounted for 23% of all households in New Brunswick by 1991. They grew by 152% during the two decades between 1971 and 1991 and numbered 58,240 at the end of that twenty year period. The projection model (PHD) predicts that the total number of *Non-Family* households will increase by 68% over the twenty year period between 1991 and 2011. (See Figure 12)

One Person households accounted for 81% of all *Non-Family* households in 1991. As can be seen in Table 6 and Figure 11, they grew by 104% over the ten year period between 1971 and 1981, slowing to a 44% growth rate for the following decade. Overall growth in *One Person* households over the twenty year period was a phenomenal 192%. *Non-Family* households which contained more one person grew at a slower rate, increasing by 60% during this time.

Table 6

Non-Family Households			
Year	Total Non-Family	One Person	Two or more Persons
1971	23070	16180	6895
1976	32230	23920	8310
1981	41525	32925	8605
1986	47840	38260	9580
1991	58240	47245	10995
	(Percent of Non-Family Households)		
1971	100.0%	70.1%	29.9%
1976	100.0%	74.2%	25.8%
1981	100.0%	79.3%	20.7%
1986	100.0%	80.0%	20.0%
1991	100.0%	81.1%	18.9%
	(Growth)		
1971-81	80.0%	103.5%	24.8%
1981-91	40.3%	43.5%	27.8%
1971-91	152.4%	192.0%	59.5%

It can be seen in Table 7 that much of the growth in the *One-Person* household category during the 1971 to 1991 period occurred in the 25-44 year age group as a result of large increases in the number of persons living alone. These increases were due, in part, to the increase in the divorce rate, the decision to postpone marriage, and the increase in the rate of persons who never married. The actual number of *Non-Family One-Person* households in the 25-44 year age group increased from 1,925 in 1971 to 12,555 by 1991, an increase of 600%.

Table 7

One-Person Households by Sex and Age Groups						
	Total	Male	Female	Total	Male	Female
1971						
15-24	770	426	338	100.0%	55.2%	43.8%
25-44	1925	1265	670	100.0%	65.7%	34.8%
45-64	5455	2320	3140	100.0%	42.5%	57.6%
65+	8015	2320	5695	100.0%	28.9%	71.1%
Total	16180	6345	9835	100.0%	39.2%	60.8%
1981						
15-24	2855	1430	1425	100.0%	50.1%	49.9%
25-44	7370	4525	2850	100.0%	61.4%	38.7%
45-64	8440	3595	4850	100.0%	42.6%	57.5%
65+	14260	3490	10755	100.0%	24.5%	75.4%
Total	32920	13035	19880	100.0%	39.6%	60.4%
1991						
15-24	2355	1200	1145	100.0%	51.0%	48.6%
25-44	12585	7875	4685	100.0%	62.7%	37.3%
45-64	11400	5080	6315	100.0%	44.4%	55.4%
65+	20845	4860	15980	100.0%	23.3%	76.7%
Total	47145	19015	28135	100.0%	40.3%	59.7%
		(Growth)				
15-24						
1971-81	270.8%	236.5%	325.4%			
1981-91	-17.5%	-16.1%	-19.6%			
1971-91	205.8%	182.4%	241.8%			
25-44						
1971-81	282.9%	257.7%	325.4%			
1981-91	70.4%	74.0%	64.4%			
1971-91	552.2%	522.5%	599.3%			
45-64						
1971-81	54.7%	55.0%	54.5%			
1981-91	35.1%	40.8%	30.2%			
1971-91	109.0%	118.1%	101.1%			
65+						
1971-81	77.9%	50.4%	88.8%			
1981-91	46.2%	39.3%	48.6%			
1971-91	160.1%	109.5%	180.6%			

There were substantially more males than females in this category, suggesting that many of the females may have been *Lone Parents* with the care of the children and that many of the males may have been divorced and living on their own. This appears to be born out when one looks at the 45 - 64 year category and sees that there were more females than males living alone. This is partly due to the fact that some of these singles were now empty nesters; their children had left home and the lone parent mother was then on her own.

If one assumes that *One-Person* households, as a percentage of the total *Non-Family* household category will remain at or near 1981, 1986 and 1991 ratios, by 2011 the number of *One-Person* households could increase by 76% over 1991 levels, upwards of 36,500 households.

Figure 11

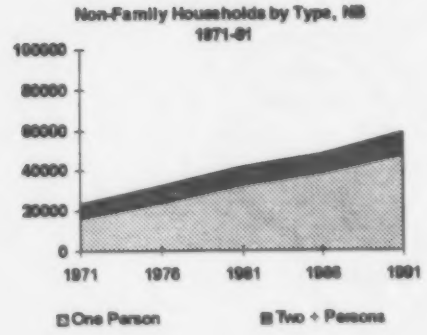
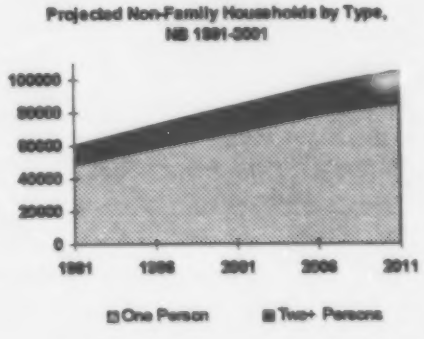


Figure 12



The number of female one-person households could increase to more than 55,000 by 2011, compared to only 30,000 male one-person households.

Figure 13

One Person Households by Sex, NB, 1971 - 1991

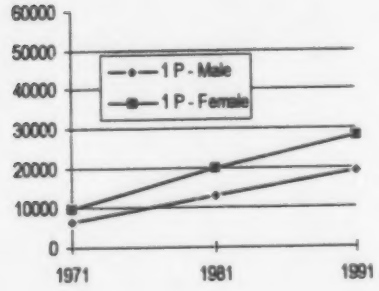
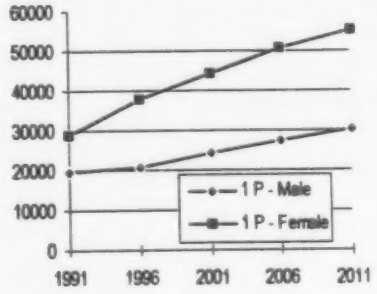


Figure 14

Projected One Person Households by Sex, NB, 1991 - 2011



Senior *One-Person* households grew from 8,015 in 1971 to 20,855 in 1991, an increase of 160%. There were substantially more senior female *One-Person* households than senior male *One-Person* households (77% vs. 23%, respectively). As noted above, a large percentage of low-income senior females living alone, especially those living in rental accommodation, have traditionally had very high shelter cost-to-income ratios and have required assistance in meeting their housing needs. Assuming that the number of senior female *One-Person* households as a percentage of the total number of senior *One-Person* households does not fall below 1991 levels during the projection years, by 2011 there could be upwards of 27,500 senior females living alone, an increase of 11,500 households over 1991 levels.

Figure 16

Senior One-Person Households by Sex, NB, 1991

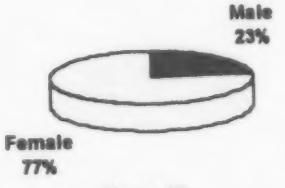


Figure 15

One Person Households by Sex, Aged 65+, NB, 1971 - 1991

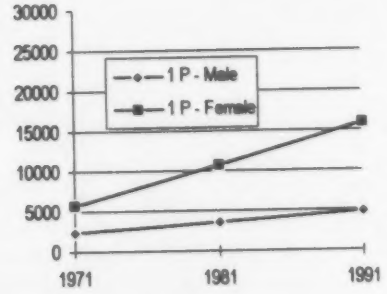
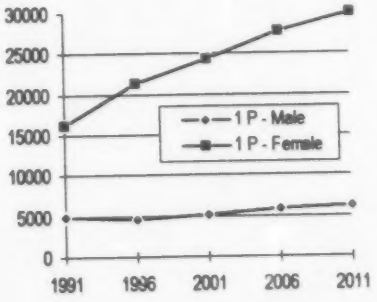


Figure 17

Projected One Person Households by Sex, Aged 65+, NB, 1991 - 2011



Households by Housing Tenure (Ownership Vs Rental)

New Brunswickers, traditionally, have exhibited a strong preference for owning their own home as opposed to renting. As is demonstrated in the following charts and tables, in 1991 nearly 75% of all New Brunswick households lived in ownership units. Rental accommodation's share of total households declined from 31% in 1971 to 26% in 1991. The actual number of rental units increased by upwards of 17,000 units over the twenty year period, an increase of 35%. Ownership units, however, increased by 72% (nearly 78,500 units during the 20 year period).

Table 8

Households by Tenure			
Year	Total	Total Owners	Total Rental
1971		109450	48185
1976	190435	136790	53640
1981	214915	157680	57240
1986	230810	171815	58995
1991	253120	187910	65210
	(Percent of Total Households)		
1971	100.0%	69.4%	30.6%
1976	100.0%	71.8%	28.2%
1981	100.0%	73.4%	26.6%
1986	100.0%	74.4%	25.6%
1991	100.0%	74.2%	25.8%
	(Growth)		
1971-91	36.3%	44.1%	18.8%
1981-91	17.8%	19.2%	13.9%
1971-91	60.6%	71.7%	35.3%

The number of households owning their own home is projected to increase by 36% over the 20 year period between 1991 and 2011 (upwards of 70,000 units); rental units are anticipated to increase by upwards of 24,000 units. This is reflective of the increase in total households.

Figure 18

Households by Tenure, NB 1971-91

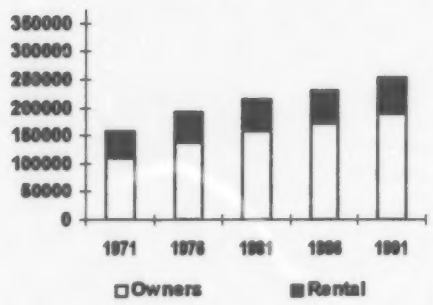
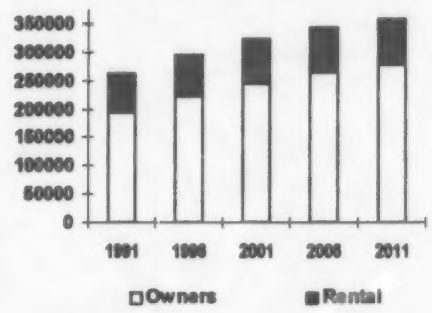


Figure 19

Projected Households by Tenure, NB 1991 - 2011



The PHD model has been used to project the tenure choices of New Brunswick households, by household type, through to 2011. The model allows for flexibility in user choice with respect to the data inputs/components used in the various stages of the projection process. As noted earlier, the model first projects households by type and age group and then, the tenure choice for each of these household types. That is, it projects, by type, the number of *Family* and *Non-Family* households which will reside in ownership units and rental units. Two different "trend" scenarios were considered for the housing tenure projection stage.

One scenario would have projected tenure choice based upon a continuation or projection of the tenure propensities which occurred during the 1971 to 1991 period, which saw exceptionally high rates of growth of homeownership as the preferred housing option. The projection of these twenty year trends would have seen the rates of ownership continuing to increase at relatively steep rates of growth so that, by 2011, 99.9% of all *Couples with Children* family households would own their own homes. Given that the decision to purchase a home is very much an decision which is based on economic factors, including the income level of the household, as well as social or demographic factors, it was agreed that these levels of growth in the rates of homeownership would be highly unlikely. The rate of growth of the economy has slowed during the last decade and is not anticipated to return to those levels of growth experienced during the 1970's and 80's within the foreseeable future.

For these reasons, scenario two, a more conservative approach, was considered. This scenario assumed that the rate of home ownership would not continue to grow at the same pace as occurred during 1971-to 1991 period, but would mirror the 1991 rate through to 2011. Therefore, the 1991 distributional rates between rental and homeownership tenure were applied to the *Non-Family* and *Family* household projections, by type, throughout the fifteen year projection period.

As can be seen in Table 9, in 1991 the majority of *Family* households lived in owned units compared to rental accommodation (81% owned vs. 19% rental). Over the twenty year period between 1971 and 1991, the Renter *Family* category actually declined in absolute terms. The *Non-Family* group showed dramatic increases in both rental and owner rates. Owner households grew by 126% over the 20 year period and rental households grew by 188%.

Table 9

Households by Type and Tenure, NB, 1971-1991

	Family			Non-Family		
Year	Total Family	Owners Family	Renters Family	Total Non-Family	Owners Non-Family	Renters Non-Family
1971	134565	96035	38530	23075	13415	9660
1976	158200	120345	37855	32235	16450	15785
1981	173390	137245	36145	41530	20435	21095
1986	183145	147150	35995	47665	24670	22995
1991	195005	157640	37365	58120	30275	27845
	(% of Family Households)			(% of Non-Family Households)		
1971	100.0%	71.4%	28.6%	100.0%	58.1%	41.9%
1976	100.0%	76.1%	23.9%	100.0%	51.0%	49.0%
1981	100.0%	79.2%	20.8%	100.0%	49.2%	50.8%
1986	100.0%	80.3%	19.7%	100.0%	51.8%	48.2%
1991	100.0%	80.8%	19.2%	100.0%	52.1%	47.9%
		(Growth)			(Growth)	
1971-81	28.9%	42.9%	-6.2%	80.0%	52.3%	118.4%
1981-91	12.5%	14.9%	3.4%	39.9%	48.2%	32.0%
1971-91	44.9%	64.1%	-3.0%	151.9%	125.7%	188.3%

Figure 20

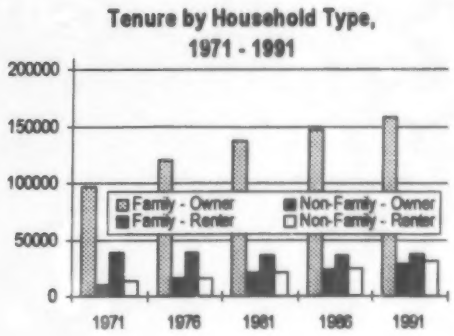
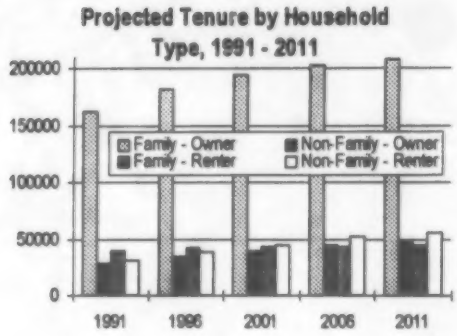


Figure 21



The following two tables show the distribution of *Family* and *Non-Family* households, by type, for both owner households and renter households. As is to be expected, the largest growth in actual numbers of owner *Family* households occurred in the *Couples with Children* category (31,265 units). However, the highest proportional growth rates occurred in the *Couples Only* and *Lone Parent* categories, which grew by 108% and 96%, respectively, over the period between 1971 and 1991. The number of ownership units in which *Multiple Family* households were living declined in both proportional and absolute terms during the 20 year period. With respect to *Non-Family* owner households, owned units occupied by only one person grew by upwards of 15,000 units (158%) between 1971 and 1991.

Table 10

	Owner Family Households					Owner Non-Family Households		
Year	Total Family	Couples only	Couples with children	Lone Parents	Multiple Family	Total Non-Family	One Person	Two or more Persons
1971	98035	23485	61140	7170	4285	13415	9500	3915
1976	120345	32135	76620	8255	3340	16450	12215	4235
1981	137245	35030	88480	10950	2785	20435	15970	4460
1986	147150	39805	91940	12955	2645	24870	19865	5010
1991	157640	48890	92405	14050	2285	30275	24530	5745
	(Percent of Owner Family Households)					(Percent of Owner Non-Family Households)		
1971	100.0%	24.4%	63.7%	7.5%	4.4%	100.0%	70.8%	29.2%
1976	100.0%	26.7%	63.7%	6.9%	2.8%	100.0%	74.3%	25.7%
1981	100.0%	25.5%	64.5%	8.0%	2.0%	100.0%	78.2%	21.8%
1986	100.0%	26.9%	62.5%	8.8%	1.8%	100.0%	79.7%	20.3%
1991	100.0%	31.0%	58.6%	8.9%	1.4%	100.0%	81.0%	19.0%
			(Growth)				(Growth)	
1971-91	42.9%	49.3%	44.7%	52.7%	-34.7%	52.3%	68.1%	13.9%
1981-91	14.9%	39.6%	4.4%	28.3%	-18.0%	48.2%	53.6%	28.8%
1971-91	64.1%	108.4%	51.1%	96.0%	-46.4%	125.7%	158.2%	46.7%

Table 11

Year	Renter Family Households: Total Family	Couples only	Couples with children	Lone Parents	Multiple Family	Renter Non-Family Households: Total Non-Family	One Person	Two or more Persons
1971	38530	9735	23660	4395	740	9660	6680	2980
1976	37855	12025	19420	5995	410	15785	11710	4080
1981	36145	11450	15680	8690	330	21095	16950	4145
1986	35095	10960	14880	9830	330	22995	18465	4530
1991	37365	12125	14000	11020	215	27845	22615	5230
		(% of Renter Family Households)				(% of Renter Non-Family Households)		
1971	100.0%	25.3%	61.4%	11.4%	1.9%	100.0%	69.2%	30.8%
1976	100.0%	31.8%	51.3%	15.8%	1.1%	100.0%	74.2%	25.8%
1981	100.0%	31.7%	43.4%	24.0%	0.9%	100.0%	80.4%	19.6%
1986	100.0%	30.4%	41.3%	27.3%	0.9%	100.0%	80.3%	19.7%
1991	100.0%	32.5%	37.5%	29.5%	0.6%	100.0%	81.2%	18.8%
			(Growth)				(Growth)	
1971-81	-6.2%	17.6%	-33.7%	97.7%	-55.4%	118.4%	153.7%	39.1%
1981-91	3.4%	5.9%	-10.7%	26.8%	-34.8%	32.0%	33.4%	26.2%
1971-91	-3.0%	24.6%	-40.8%	150.7%	-70.9%	188.3%	238.5%	75.5%

As can be seen in Tables 12 and 13, when 1971-1991 distributions are examined for owner and renter households by specific age groups (and, for *One-Person* households, by sex) certain differences in rates of growth over the period are noted, particularly in the *Lone Parent*, *Couples only*, *Couples with Children* and *One-Person* household categories.

Table 12

Year / Age	Family Households: Owners: Couples	Owners: Couples with Children	Owners: Lone Parent	Renters: Couples	Renters: Couples with Children	Renters: Lone Parent	Total: Couples	Total: Couples with Children	Total: Lone Parent
1971									
15-24	825	1690	80	2375	3145	285	3200	4835	365
25-44	2275	31015	1460	2780	15285	1610	5055	46300	3070
45-64	10130	25985	3280	2440	4845	1255	12570	30830	4535
65+	10225	2440	2345	2135	385	545	12360	2825	2890
Total	23465	61140	7170	9735	23660	4395	33195	84800	11565
1981									
15-24	1685	2105	250	3065	2215	1525	4730	4320	1775
25-44	6850	53345	3695	3835	10200	4700	10585	63445	8395
45-64	13345	28810	4865	1880	2795	1955	15225	31605	6820
65+	13370	4225	2135	2665	445	495	16035	4670	2630
Total	35030	88480	10950	11450	15680	8690	46480	104160	19640
1991									
15-24	915	805	180	2225	1285	1545	3140	2090	1725
25-44	10570	57340	5800	5235	10360	7130	15805	67700	12930
45-64	19125	29600	5000	2005	2055	1800	21130	31655	6800
65+	18280	4670	3085	2660	290	545	20940	4960	3610
Total	48890	92405	14050	12125	14000	11020	61015	106405	25070

Table 13

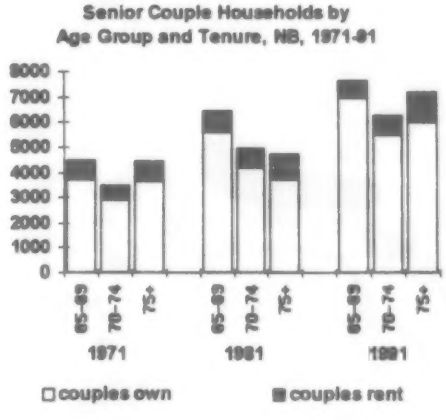
Non-Family One-Person Households									
	Owners			Renters			Total		
Year / Age	Total	Male	Female	Total	Male	Female	Total	Male	Female
1971									
15-24	115	70	40	655	355	295	770	425	335
25-44	615	500	125	1310	765	545	1925	1265	670
45-64	3345	1635	1720	2110	685	1420	5455	2320	3140
65+	5410	1755	3650	2605	585	2045	8015	2320	5695
Total	9500	3970	5530	6680	2375	4305	16180	6345	9835
1981									
15-24	355	270	85	2500	1160	1340	2855	1430	1425
25-44	2410	1900	510	4960	2625	2340	7370	4525	2850
45-64	5065	2330	2730	3385	1265	2120	8440	3595	4850
65+	8155	2385	5765	6105	1105	4990	14260	3490	10755
Total	15970	6875	9095	16950	6160	10795	32920	13035	19890
1991									
15-24	330	245	75	2025	955	1070	2355	1200	1145
25-44	5020	3665	1355	7535	4210	3330	12555	7875	4685
45-64	6915	3140	3750	4485	1920	2565	11400	5060	6315
65+	12270	3355	8915	8575	1505	7065	20845	4860	15980
Total	24530	10425	14105	22615	8590	14030	47145	19015	28135

Tenure Choices of Family Households - *Couples Without Children*

The number of households comprised of *Couples Without Children* living in owned accommodation grew dramatically during the 1971 to 1991 period. Households with the head aged between 25 and 44 showed the strongest rates of growth increasing by 192% between 1971 and 1981, and 59% between 1981 and 1991, for a total growth rate of 365% over the twenty year period.

The number of senior *Couples Without Children* households grew from 12,360 in 1971 to 20,940 by 1991 (160%). In 1991, eighty-seven percent (87%) of all senior couples households owned their own homes; only 2,660 (13%) lived in rental units. The total number of elderly senior couples (aged 75+) grew slowly between 1971 and 1981 (6% growth) but increased markedly between 1981 and 1991 (52 %). This is due, in part, to an increase in life expectancy rates for males during this decade.

Figure 22



Rental tenure choice for elderly senior couple households increased between couple households increased between 1971 and 1981 (18% compared to 21%) but fell to pre-1971 levels by 1991. Again, this is indicative of improvements in the overall health of elderly seniors which allowed them to stay in their ownership unit and, possibly, as a positive result of the provision of a variety of services to assist seniors in their own homes, including home renovation and retrofit programs.

Figure 23

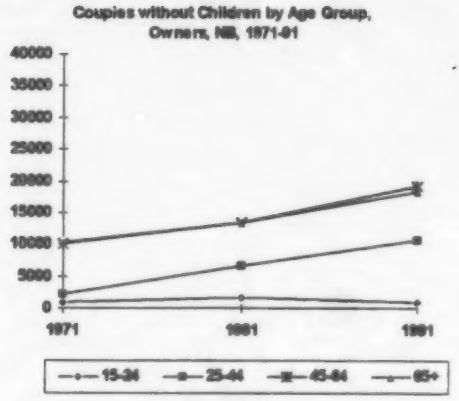


Figure 24

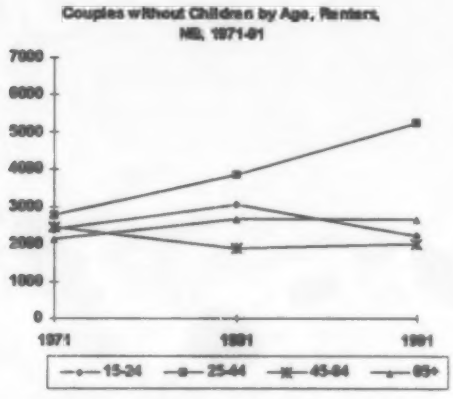


Figure 25

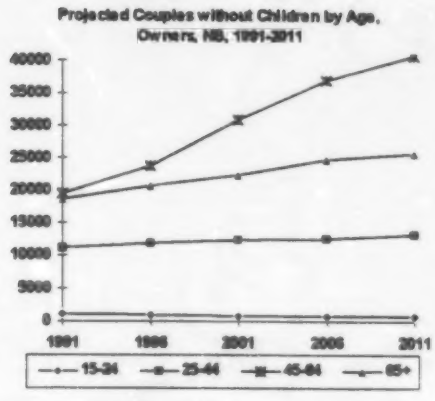
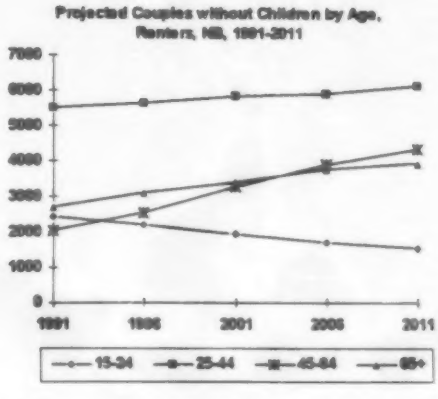


Figure 26



Assuming the tenure choices of *Couples without Children* households are similar to the choices made by *Couples without Children* in 1991, those aged 25 and over will continue to favour ownership as their tenure preference. Young *Couples Without Children* (15-24) will continue to favour rental accommodation, due to the relatively high cost of homeownership. The number of senior couple households owning their own home are anticipated to grow by 38% (upwards of 7,000 households) during the 20 year period between 1991 and 2011.

Couples With Children

When one examines the age and tenure distributions of *Couples with Children* households (Table 12), it is evident that only a small proportion of young couples, those less than 25 years of age, could afford homeownership in 1991. Only 39% of such families lived in owned units compared to 62% who were in rental accommodation. As is expected, the rates of ownership increased as the age of the head of the household increased. Eighty-five percent (85%) of households where the head was aged between 25 years and 44 years lived in owned units as did 94% of those aged 45 - 64 years.

Figure 27

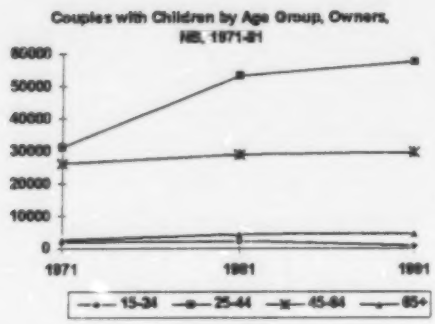


Figure 28

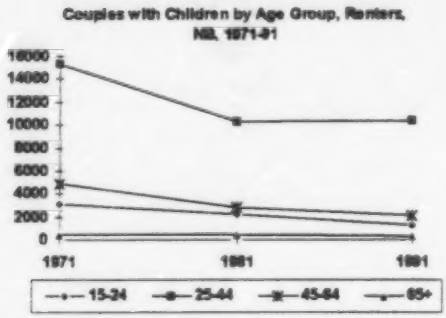


Figure 29

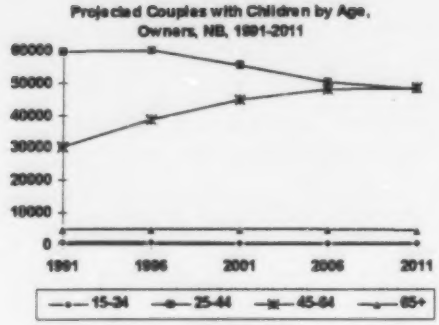
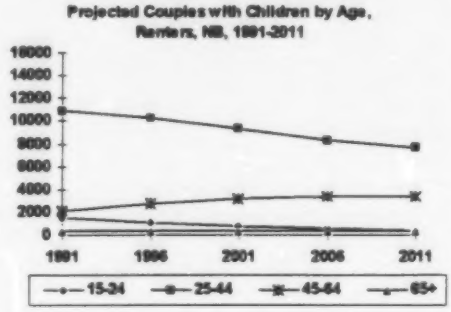


Figure 30



Based on the assumption that tenure preferences will be held constant over the projection period, the number of *Couples with Children* households living in owned units will increase by only 5% by 2100, with most of the growth occurring in the early part of the period. (Figures 23 -26). The numbers living in owned units is anticipated to decline in absolute terms from a peak of nearly 105,000 in 2001 to approximately 100,000 by 2011. Rental occupancy by *Couples with Children* is also anticipated to continue to decline through to 2011. This decline was underway during the 1971 to 1981 period and, by 2011, the number is anticipated to be in the vicinity of 11,500. As noted earlier, this is more a function of a decline in the number of *Couples with Children* households than a function of tenure choice or overall population decline.

Lone-Parent Households

As can be seen in Table 12 and in Figures 31 to 34, when *Lone Parent* households are examined by age group and tenure, several differences become evident. *Lone Parent* headed households where the head was aged less than 25 years lived mainly in rental accommodation (86%). The numbers of young *Lone Parent* households increased by upwards of 350% during the decade between 1971 and 1981, then started to decline during the 1981 to 1991 decade. This is not to say that the number of lone parents aged 15 to 24 declined, but it is probable that fewer lone parent family heads in this age group were able to afford to maintain separate households during the 1981 to 1991 period.

F3

The number of *Lone Parents* in the 25-44 year age group increased from 3,360 households in 1971 to 12,930 households by 1991, an increase of 285%. Fewer lone parents in this age group were homeowners than renters (45% homeowners in 1991 compared to 55% renters). However, *Lone Parent* households where the parent was in the 45-64 year category had substantially higher rates of homeownership - 74% in 1991 compared to 27% rental.

Figure 31

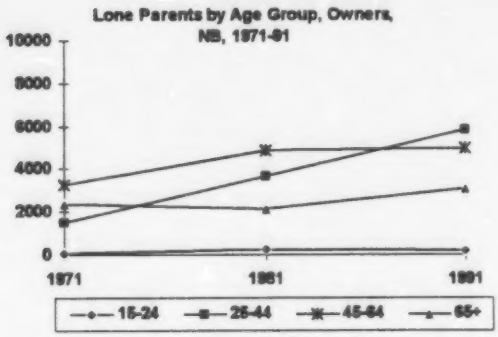


Figure 32

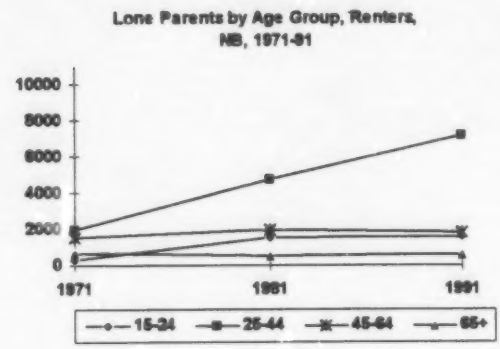


Figure 33

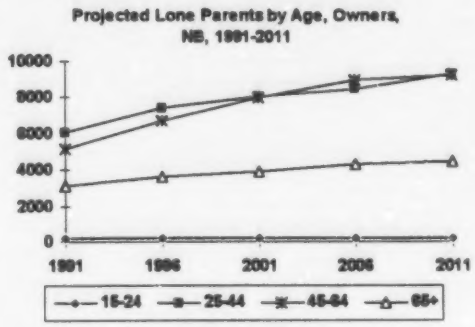
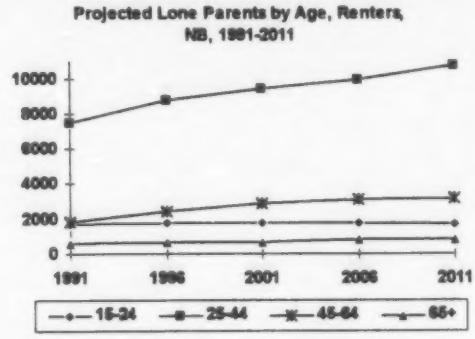


Figure 34



It is projected that *Lone Parent* households will continue to increase during the projection period such that by 2011, there could be nearly 40,000 *Lone Parent* households; 23,000 living in ownership housing units and 16,400 living in rental accommodation. Most of these will be female led, and in many cases, of lower than average family income levels.

Non-Family Households by Tenure by Age Group

As seen earlier in Table 9, *Non-Family* households grew dramatically over the twenty year period between 1971 and 1991 with much of the growth in the *Non-Family* households category occurring as a result of large increases in the number of persons living alone (Table 10). *Non-Family* households living in owned units increased from 13,415 to 30,275 (126%). Renting increased as a tenure option among *Non-Family* households during this time, increasing from 42% to 48% of tenure choice (9,660 households to 27,845 households), while ownership fell from 58% to 52%.

When examined on the basis of age, several differences are evident. Of *Non-Family* households where the head was aged 15-24, 86% lived in rental housing; only 14% owned their own homes. Unlike their *Family* household counterparts, sixty percent (60%) of those living alone aged 25-44 lived in rental housing. Higher percentages of older singles tended to own their homes (61% of those aged 45-64, and 59% of those aged 65 and over). The actual number of owner households occupied by *One Person* aged 65 or older increased from 5,410 units in 1971 to 12,270 units by 1991 (a growth of 6,860 units or 126.8%).

Figure 35

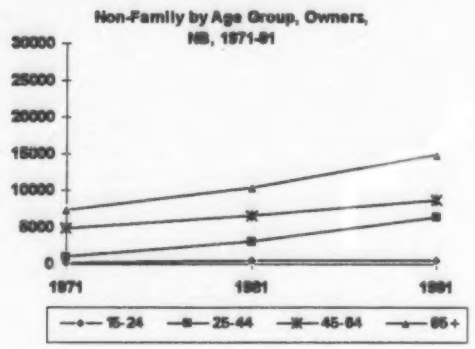


Figure 36

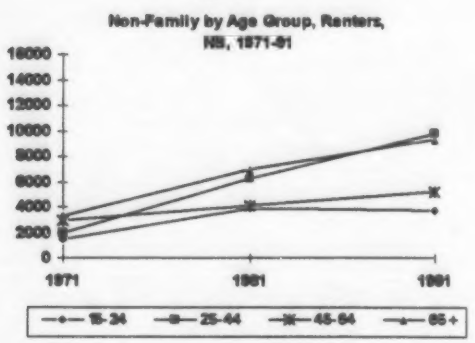


Figure 37

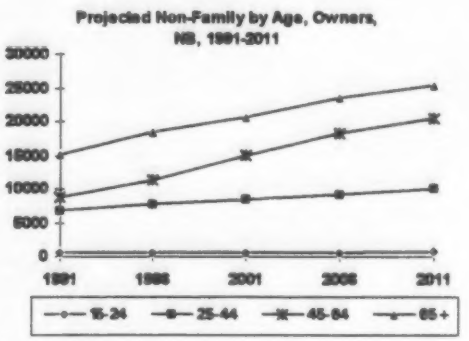
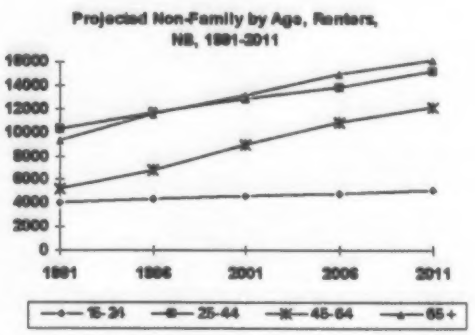


Figure 38



As is to be expected, more single men than single women in each age group were homeowners. For those aged less than 25, only 7% of *One-Person* female households owned their own home, compared to 20% of males. For those aged 25-44, 47% of males owned, compared to only 29% of females. For seniors, sixty-nine percent (69%) of males aged 65 and over owned their own homes compared to only 56% of women.

Figure 39

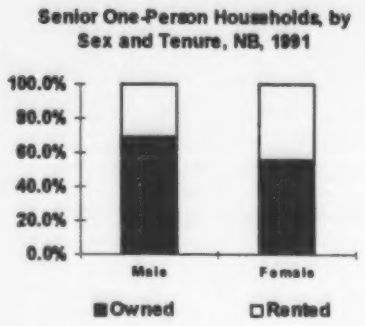


Figure 40

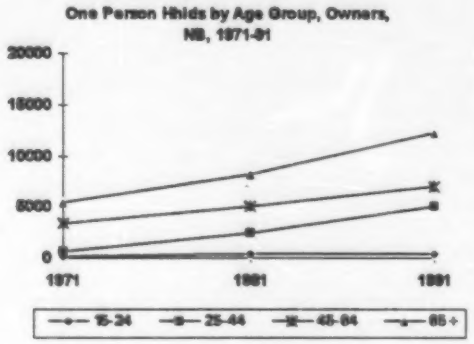


Figure 41

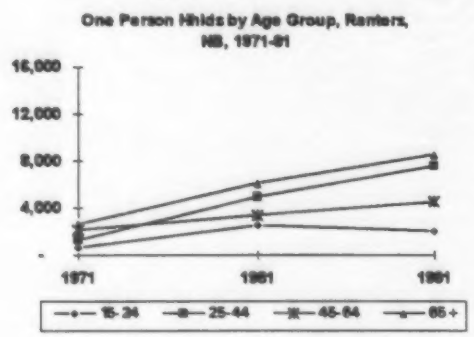


Figure 42

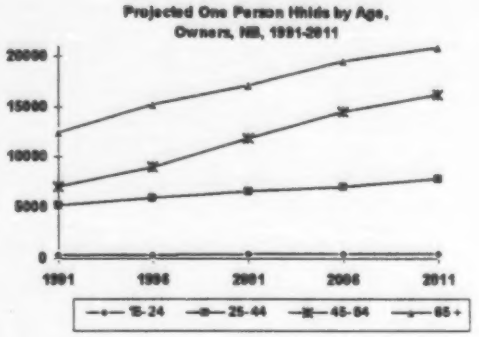
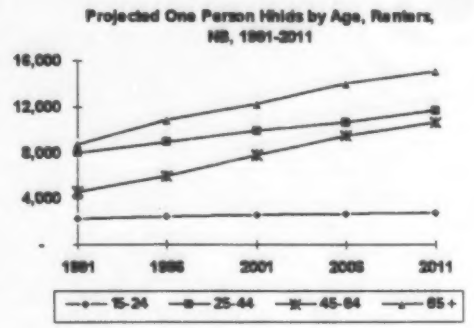


Figure 43



As noted earlier, a slightly different approach was used to project demographic change within the *Non-Family* household category. Projected tenure choice has been based upon 1991 tenure distributions. Also, projections of "type" distributions (*one-person* versus *two or more persons* per household) have been based on the assumption that the *Non-Family* households within each age category will exhibit the same "type" characteristics as existed in 1991.

The number of *Non-Family* households is anticipated to grow by 75% during the period from 1991 to 2011. Assuming the tenure characteristics of these households mirror those of *Non-Family* households in 1991, by 2011 the living in owned units will increase by upwards of 25,000 (81%), while the number living in rental accommodation will increase by nearly 20,000 households (68%).

As shown in Figures 40 - 44, it is anticipated that nearly all of the projected 5,700 young *Non-Family* households aged 15-24 will be living in rental accommodation (nearly 5,000 households) with roughly 55% of them living alone and the other 45% sharing with other "unattached" individuals. For those *Non-Family* households where the head is aged 25-44 years, (upwards of 25,000 households) the majority (77%) will be single persons living alone while the remaining 23% will share accommodation with others. Forty percent (40%) are anticipated to own their own home, while the remaining 60% will live in rental accommodation. *Non-Family* households where the head of the household is in the 45-64 year age bracket are projected to increase to nearly 32,500 by 2011. Eighty-three percent (83%) could be living alone while 17% could share with other people who are not family members; 63% could own their own home and 37%, rent.

If senior *Non-Family* households (65+), distribute themselves by tenure and "type" in the same manner as the 1991 population, 87% will live alone. Of these, 58% are likely to be homeowners and 42% will likely live in rental units. The remaining 13% are likely to share accommodation with other unrelated persons, but would have higher rates of homeownership (80% own compared to 20% rent). One group of seniors which have traditionally been in greatest need of housing assistance is single females living alone. It is anticipated that this group could increase by 83% or upwards of 13,000 households by 2011.

Housing and Affordability

Historically, the majority of government sponsored housing programs in New Brunswick have been "needs" tested and directed to lower income households. Because housing is not a "universal" program, service delivery choices must be made with respect to households served. In most cases, selection is based on the concept of "worst first". One selection criteria used in the process is the "shelter cost-to-income" ratio (SCI) of the household, a nationally accepted measure of affordability of shelter which is used extensively in the social housing program area. Although it is recognised that high income households can "afford" to pay a higher percentage of their income on shelter or some other commodity without jeopardising their ability to meet their other basic needs, it is generally held that households of low to moderate income, who are required by their living circumstances to pay more than 30% of their income on shelter, are considered to be experiencing shelter affordability problems.

The SCI ratios for homeowners are based upon the ratio of the owner's major monthly shelter payments to the gross income of the household. An owner's *Major Monthly Payments* refers to the total average monthly payments made the owner's households to secure shelter, including payments for heat, electricity, water and other municipal services, monthly mortgage payments both principal and interest, and property taxes.

The SCI ratios for renters are based upon the ratio of the gross rent paid by the tenant household to the gross income of the household. As with owner households, the total income of a household is the sum of the total incomes of all members of the household. Gross rent refers to the total average monthly payments paid by tenant households to secure shelter and can include payments for heat, electricity, water and other municipal services, and monthly cash rent.

No attempts have been made to project future income levels or *shelter cost-to-income* ratios of New Brunswick households to 2011. It has been suggested, however, that incomes of the "non-elderly" population are not likely to increase dramatically over the next 15 year period, nor are shelter costs expected to remain at present levels or decline. Although the average income of the "young" senior population is anticipated to be somewhat higher than that of today's "young" seniors, not all seniors will be so fortunate. It is felt that the majority of single female seniors will continue to have low incomes and will be forced to rely heavily on public sources of income. Most of the "elder" senior population is female. It is anticipated that the majority of senior females will to continue to be found in the lower income quintiles. For these reasons, it is felt that an examination of affordability problems, by age group, may provide some insight into the potential size of future population groups with affordability problems.

The data from the 1991 Census reveal that 11% of all owner households in New Brunswick (approximately 20,800) had *shelter cost-to-income* ratios (SCIs) of 30% or greater. By comparison, fully 37% (23,800) of all rental households had *shelter cost to income* ratios of this magnitude. The following charts and tables examine the *shelter cost-to-income* ratios of owners and renters by age group and sex of the head of household.

Table 14

SCI Ratios of Owner Households, by Age Group, NB, 1991

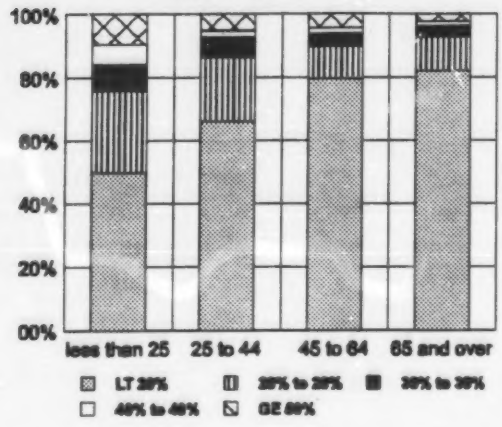
	less than 25	25 to 44	45 to 64	65 and over	Total
LT 20%	49.7%	66.2%	79.7%	82.3%	74.1%
20% to 29%	26.0%	20.2%	10.0%	10.5%	14.7%
30% to 39%	8.3%	6.2%	4.2%	3.5%	4.9%
40% to 49%	6.3%	2.3%	1.7%	1.5%	2.0%
GE 50%	9.6%	5.1%	4.4%	2.2%	4.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

Table 15

SCI Ratios of Renter Households, by Age Group, NB, 1991

	less than 25	25 to 44	45 to 64	65 and over	Total
LT 20%	34.5%	51.0%	43.8%	24.1%	42.3%
20% to 29%	19.5%	20.6%	19.1%	24.7%	21.0%
30% to 39%	11.6%	9.1%	11.4%	28.2%	13.5%
40% to 49%	8.2%	5.2%	7.3%	12.2%	7.3%
GE 50%	26.3%	14.2%	18.4%	10.7%	15.9%
Total	100.0%	100.0%	100.0%	100.0%	100.0%

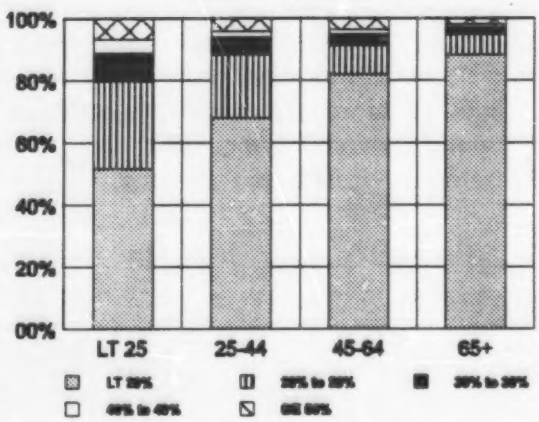
Figure 44
SCI Ratios of Owner Hhlds, by Age Group, NB, 1991



Young homeowners (those less than 45 years of age) experienced more affordability problems than older homeowners. These differences can be partially explained by the lower income levels of younger wage earners, but are also directly related to the high shelter costs associated with mortgage repayment. In many instances, those over 45 years of age are mortgage free or have sufficient income to allow them to repay a mortgage and still remain below a 30% *shelter cost-to-income* ratio.

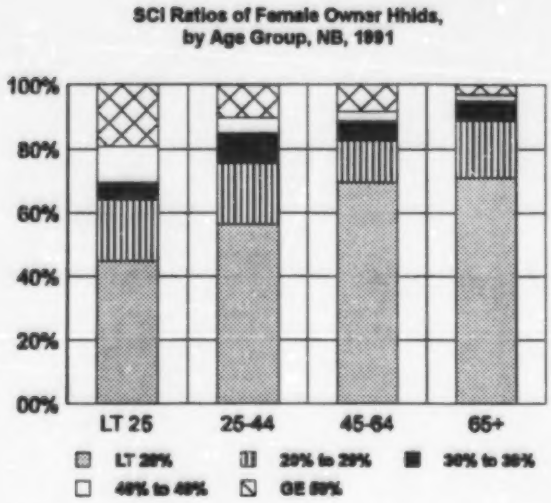
Very young homeowners, those less than 25 years of age, had more difficulty addressing their shelter needs than other homeowners. Nearly one quarter of them spent more than 30% of their household income on shelter during 1990. Only 10% and 7%, respectively, of homeowners aged 45-64 and 65 and over paid more than 30%.

Figure 45
SCI Ratios of Male Owner Hhlds, by Age Group, NB, 1991



Male headed owner households did not experience the same degree of affordability problems as did female headed owner households, although their numbers were greater in absolute terms. Only 10% of male homeowners had *shelter cost to income* ratios in excess of 30%, compared to 17% of female owners. The problems were more severe in the younger age groups.

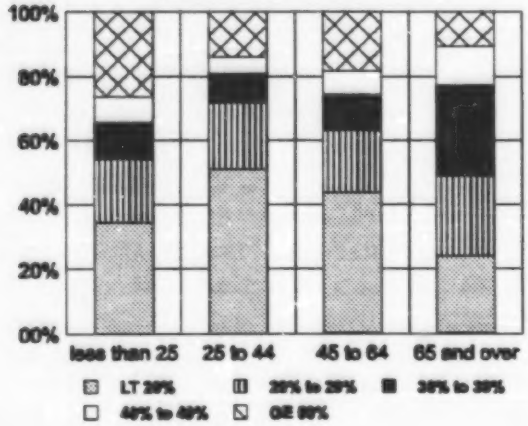
Figure 46



Thirty-five percent (35%) of female-led owner households with the head aged less than 25 experienced affordability problems, as did 24% of those aged 25 to 44 years. Seventeen percent (17%) of senior female homeowners also spent more than 30% for shelter.

When the *shelter cost-to-income* ratios of renter households, by age group, are compared to homeowner ratios it is clearly evident that the affordability problems of renters are more severe for each age group. As noted earlier, approximately 23,800 rental households had high shelter costs relative to their incomes.

Figure 47
SCI Ratios of Renter Hhlds,
by Age Group, NB, 1991



Forty-six percent (46%) of rental households where the head was aged less than 25 years of age (4000 households) paid more than 30% of their household income for shelter and 34% (3,100) paid more than 40% of their income. More than 9,200 in the 25-44 year age group and nearly 4,000 in the 45-64 year age group also had affordability problems. More than half (51%) of all senior rental households spent more than 30% on shelter (6,400).

Figure 48
SCI Ratios of Male Renter Hhlds,
by Age Group, NB, 1991

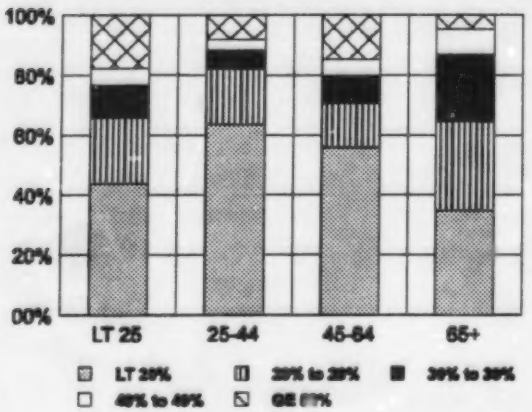
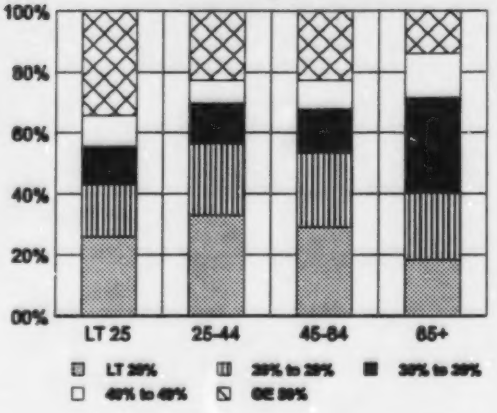


Figure 49
SCI Ratios of Male Renter Hhlds,
by Age Group, NB, 1991



Substantively higher numbers of female-led rental households were above the 30% line than were their male counterparts. Sixty-five percent (65%), of all rental households paying more than 30% were headed by a female (15,600 units). Ten thousand (10,000) female headed households paid more than 40% of their income for shelter. As can be seen in the charts, the incidence of those paying more than 30% was high for all age groups for both men and women, but the problems were more severe for women than for men.

Households by Community Size

One factor to consider when examining the demographic characteristics of the population is where people live. The following table has been extracted from the report of *The Commission on Land Use and the Rural Environment*. As described in the Report, the table presents a breakdown of urban, rural and non-incorporated population growth in New Brunswick over the past 20 years. Statistics Canada defines "rural" as being an area with a population concentration of less than 1000 persons and a population density of less than 400 persons per square kilometre. "Non-incorporated" refers to those areas lying outside incorporated municipalities (cities, towns, and villages). All of the population in the non-incorporated areas of the province are included in the "rural" designation. In addition, some portions of the incorporated municipalities have population concentrations of less than 1,000 people or densities below 400 per square kilometre and are, therefore, included in the rural designation. Thus, there are more people in the "rural" designation than in the non-incorporated designation. New Brunswick has the fastest growing rural population in Canada. (Final Report, *The Commission on Land Use and the Rural Environment*, April 1993, P. 21)

Table 16

URBAN AND RURAL POPULATION CHARACTERISTICS, NEW BRUNSWICK AND CANADA, 1971 TO 1991

	New Brunswick									
Population	1971		1976		1981		1986		1991	
Characteristic	No.	%	No.	%	No.	%	No.	%	No.	%
Urban Total	345,960	54.5	354,420	52.3	353,220	50.7	350,300	49.4	345,214	47.7
Rural Total	288,600	45.5	322,835	47.7	343,185	49.3	359,135	50.6	378,686	52.3
Rural Farm	16,800	2.6	11,685	1.8	14,970	2.1	12,110	1.7	...	...
Rural Non-Farm	271,800	42.9	311,150	45.9	382,215	47.1	347,025	48.9	...	...
Total	634,560	100.0	677,255	100.0	696,405	100.0	709,435	100.0	723,900	100.0
Incorporated	408,266	64.3	426,799	63.1	429,025	61.6	426,852	60.2	435,720	60.2
Non-Incorporated	226,291	35.7	250,454	36.9	267,378	38.4	282,590	39.8	288,190	39.8
Total	634,557	100.0	677,250	100.0	696,403	100.0	709,442	100.0	723,910	100.0

	Canada									
Population	1971		1976		1981		1986		1991	
Characteristic	No.	%	No.	%	No.	%	No.	%	No.	%
Urban Total [1]	16,399,920	76.2	17,366,970	75.5	18,435,930	75.7	19,352,085	76.5	20,907,957	76.6
Rural Total	5,168,390	24	5,630,630	24.5	5,907,255	24.2	5,957,245	23.5	6,388,902	23.4
Rural Farm	1,162,145	5.2	1,039,560	4.5	1,039,855	4.3	890,490	3.5	...	...
Rural Non-Farm	4,006,245	20.7	4,591,070	20.0	4,867,400	20.0	5,066,760	19.2	...	...
Total	21,568,310	100.0	22,997,600	100.0	24,343,185	100.0	25,309,330	100.0	27,296,859	100.0

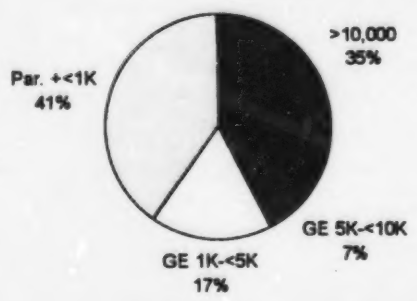
Source: . (Final Report, *The Commission on Land Use and the Rural Environment*, April 1993, P. 22

As the CLURE report indicated, incorporated areas in New Brunswick have been losing population share to non-incorporated areas. Between 1976 and 1991 the incorporated areas' share of the Provincial population dropped from 64% to 60%, while the non-incorporated areas' share increased from 36% to 40%.

In 1991, approximately thirty-five percent (35%) of the non-farm, non-reserve households were located in communities having population levels of 10,000 or greater; 7% in communities with population levels between 5,000 and 10,000; 17% in communities between 1,000 and 5,000; and the rest, approximately 40% of total households, in the combined area of the various parishes plus communities with population levels of less than 1,000 population.

Figure 50

Households by Community Size, NB, 1991



As can be seen in Table 17 and Figure 51, when the distribution of households is examined by tenure, it is evident that those areas of the province with the lowest concentrations of population had higher rates of homeownership than the more urbanized areas. In 1991, 41% of households in communities with population levels of 10,000 or more lived in rental units and 59% lived in ownership units; in the most rural areas, 89% of the households lived in owned units (parishes and communities with less than 1,000 population levels).

Figure 51

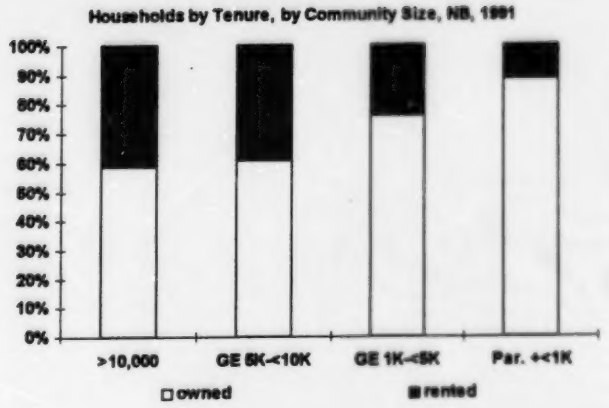


Table 17

Community Size	All Households		
	owned	rented	total
>10,000	59%	41%	35%
5K-<10K	61%	39%	7%
1K-<5K	76%	24%	17%
Par+<1K	89%	11%	41%
total	74%	26%	100%

When households within the different communities are studied by the age of the head of household, some further differences are evident. Table 18 shows the percentage of total households which were owner households and renter households, by community size group, by age of head.

Table 18

Percentage Distribution of Households by Tenure, by Age Group, by Community Size,												
	Less than 25			25 to 44			45 to 64			65 and over		
Population	owned	rented	total	owned	rented	total	owned	rented	total	owned	rented	total
>10,000	8%	92%	100%	54%	46%	100%	75%	25%	100%	62%	38%	100%
GE 5K-<10K	11%	89%	100%	53%	47%	100%	79%	21%	100%	71%	29%	100%
GE 1K-<5K	18%	82%	100%	75%	25%	100%	87%	13%	100%	76%	24%	100%
Par. +<1K	45%	55%	100%	86%	14%	100%	94%	6%	100%	92%	8%	100%
total	21%	79%	100%	71%	29%	100%	85%	15%	100%	76%	24%	100%

With the exception of those aged less than 25, most households in the rural parishes and small communities lived in ownership units. The majority of those households with heads aged less than 25 living in communities of 1,000 population or greater, resided in rental units. The incidence of rental among all age groups was higher in larger communities than in smaller communities and the rural parish areas, reflective of the necessity to have population concentration in order to sustain a rental market.

Table 19

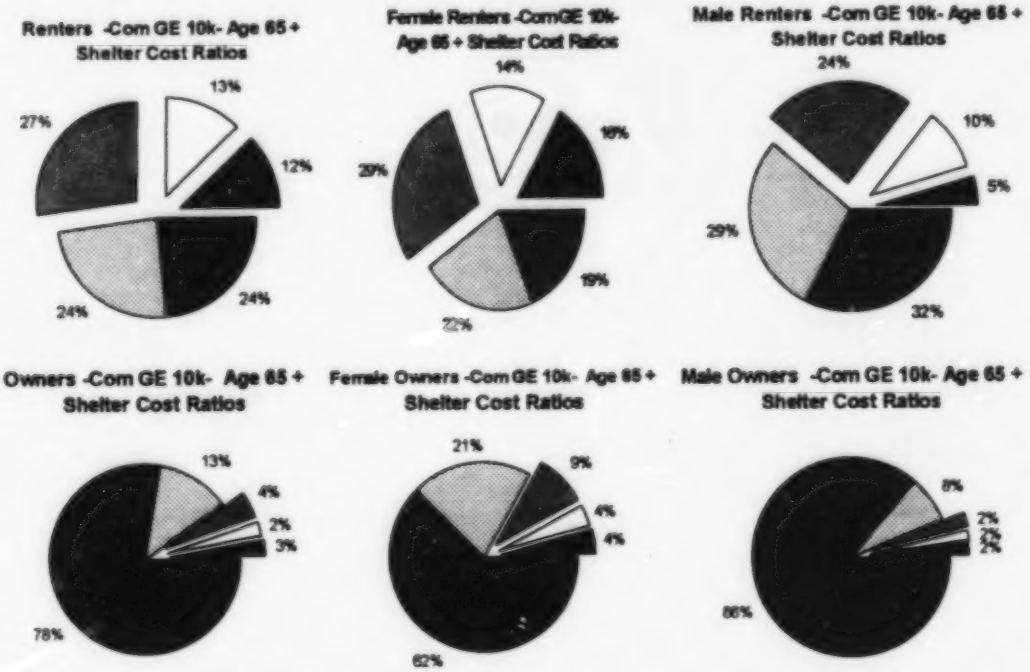
Percentage Distribution of Households by Age Group, by Tenure, by Community Size												
	Less than 25			25 to 44			45 to 64			65 and over		
Population	owned	rented	total	owned	rented	total	owned	rented	total	owned	rented	total
>10,000	18%	56%	48%	25%	52%	33%	30%	59%	35%	30%	60%	37%
GE 5K-<10K	5%	10%	9%	6%	13%	8%	6%	10%	7%	6%	8%	7%
GE 1K-<5K	13%	15%	15%	17%	14%	17%	17%	15%	17%	18%	19%	19%
Par. +<1K	64%	19%	28%	51%	21%	42%	46%	16%	42%	45%	13%	38%
total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

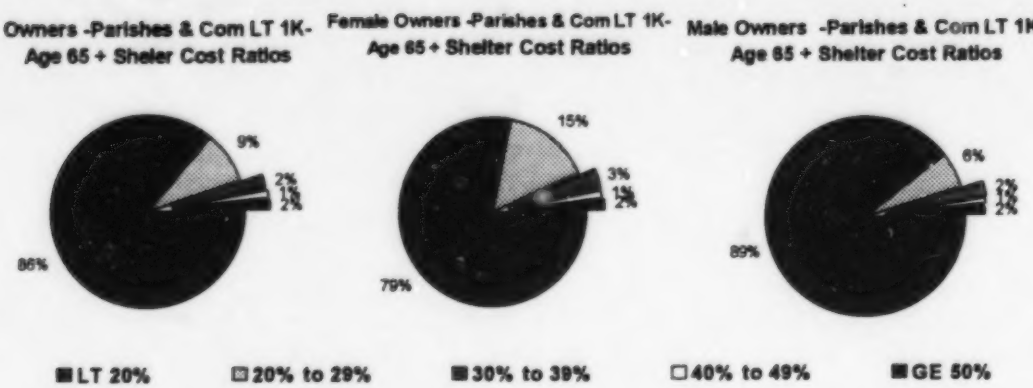
Higher percentages of young households lived in the major urban areas than those in the other age groups (48% of those households aged 15-24, compared to 33% - 37% for the other age groups). Conversely, those aged 25-44, 45-64 and 65+ were found in higher concentrations in the smallest community size group (parishes plus communities with population levels less than 1000) than those aged 15-24 (42%, 42%, and 38% compared to 28%).

Community Size and Housing Affordability.

If one considers the affordability problems of renter and owner households by community size, several differences are evident. The pie charts below provide a comparison of shelter cost-to-income ratios of male and female-led senior owner households living in the major urban communities to those living in the smallest sized group (parishes + <1,000) as well as similar comparisons for the 25-44 year old age group. Pie charts are also included for senior renter households in the major urban centres.

Figure 52

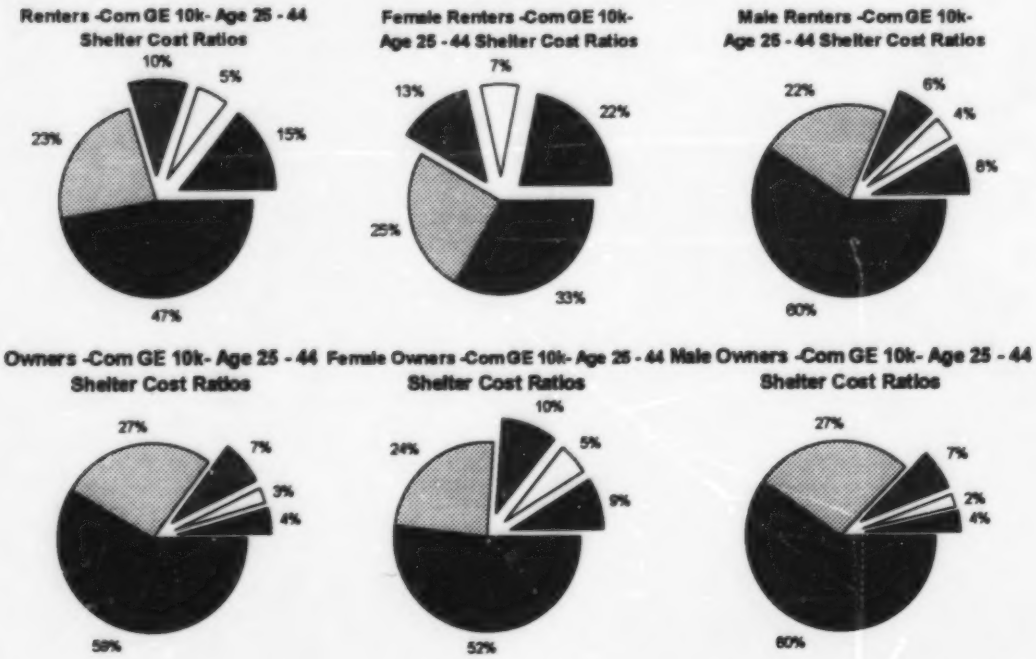


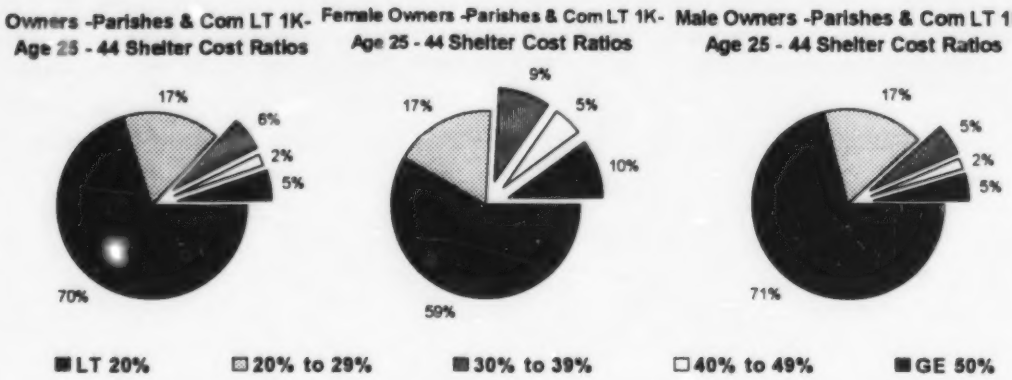


It is evident that the incidence of affordability problems was higher for senior renters in the major urban centres than for senior owners, and the problems are more severe for senior households headed by females than by males. It is also evident that the incidence of affordability problems was higher for senior owners in the major urban centres than in the more rural areas of the province.

The following pie charts show similar data for households aged 25-44 in these different community groups.

Figure 53





As with senior households, in the major urban centres, renter households with the head aged 25 to 44 had higher incidences of affordability problems than their owner counterparts, and those living in the smaller areas of the province had lower incidence than those in the major urban centres.

Summary:

The number of households in New Brunswick grew rapidly during the two decades between 1971 and 1991, largely as a result of the maturing of the baby boomers who entered the major household formation stages of their lives during this time frame. *Lone Parent* and *One-Person* households accounted for much of this growth over the 20 year period. Indications are that many of the factors which contributed to these growth rates will likely continue to influence household formation and housing choices over the years between 1995 and 2011. Although there will be no "baby boomer" generation to swell the number of households, other choices are expected to continue to result in fewer persons per household - marriage rates are not expected to increase; divorce rates are not expected to decline; more seniors, especially women, are expected to be living for longer periods of time, part of that time alone. All of these factors will contribute to the growth of *One-Person* and *Lone Parent* households. Where marriages occur, it is anticipated that couples will continue to defer having children and will have fewer children than in previous decades; therefore, the number of *Couples without Children* households will increase at higher rates than the number of *Couples with Children* households, and average household size will continue to decline.

It is anticipated that the tenure choices of all households in 2011 will mirror those of 1991. If there are no dramatic changes in income levels, employment patterns or population growth within the 25-44 year age group during the projection period, those factors which all heavily influence household growth and tenure choice, the number of households living in owned accommodation could increase by 70,000 and those living in rental accommodation by 24,000 households by 2011.

Given these same assumptions, ownership should continue to be the preferred housing choice of *Family* households, while *Non-Family* households, as a group, should be relatively evenly split between the two tenure types.

Very young *Couples without Children* will likely continue to favour rental accommodation while those 25 and over will prefer homeownership, and hopefully, will be able to afford it. The number of *Couples with Children* households living in both rental and ownership housing will likely decline over the projection period. As for *Lone Parent* households, upwards of 23,000 could be living in ownership units and 16,000 in rental. The majority will be female-led and generally of lower than average household income levels.

Non-Family households living in owned units are likely to increase at a faster rate than those living in rental accommodation (81% compared to 68%). Higher percentages of young and old people living alone are anticipated to live in rental housing compared to their counterparts in the 25 to 44 and 45 to 64 year age groups.

No attempt was made to project affordability problems of future households. However, a look at 1991 distributions was undertaken to provide some insight into the potential for different households by age group and tenure type to experience difficulty in meeting their shelter costs. In 1991, young homeowners experienced more affordability problems than older homeowners. Senior renters, many of whom were females living alone, had some of the highest incidences of affordability problems as did very young households. Sixty-five percent (65%) of all rental households paying more than 30% of their total household income for shelter were headed by a female.

As to the distribution of households by community size, it is clear that rural areas of the province gained in share of total population while urban communities declined in share. In 1991, only thirty-five percent (35%) of all households lived in major urban centres of population 10,000 or greater. Seven percent (7%) lived in communities with population between 5,000 and 10,000, a further 17% in communities with population levels between 1,000 and 5,000, and fully 40% in communities of less than 1,000 population or in the rural parishes of the province.

With the exception of those aged less than 25, most households in the rural parishes and small communities lived in ownership units. The majority of those households with heads aged less than 25 living in communities of 1,000 population or greater, resided in rental units. The incidence of rental among all age groups was higher in larger communities than in smaller communities and the rural parish areas, reflective of the necessity to have population concentration in order to sustain a rental market. When each age group is viewed by where they lived, it is seen that higher percentages of young households lived in the major urban areas than those in the other age groups.

The incidence of affordability problems was higher for senior renters in the major urban centres than for senior owners, and the problems were more severe for senior households headed by females than by males. It is also evident that the incidence of affordability problems was higher for senior owners in the major urban centres than in the more rural areas of the province. As with senior households, in the major urban centres, renter households with the head aged 25 to 44 had higher incidences of affordability problems than their owner counterparts, and those living in the smaller areas of the province had lower incidence than those in the major urban centres.

EXPLANATORY NOTES

1. Comparisons 1971-1991 actuals with 1996 - 2011 projections

The historical data have been extracted from the various Census of Population for the 1971 to 1991 period. Using these data, trends in the proportional distributions and growth rates of households and families, by type, were determined. A model developed by Canada Mortgage and Housing Corporation (see below) was used to project the number and type of households and their tenure choices.

The population projections developed by the Statistics Agency were used within the model as the base population information for these household projections. These population projections have been based upon Final Postcensal Estimates of Population produced by Statistics Canada. There is a variance between the population counts published in the various Census and those reported in the Postcensal Estimates of population. Statistics Canada has estimated that the 1991 Census results "under-counted" the population of New Brunswick by 32,055 persons for that year. This under-count in population is corrected for in the Postcensal Population Estimates. However, any calculations of estimates of the numbers of households, etc., based upon these postcensal population estimates will be higher than the Census counts. For this reason, the 1991 household estimated determined using the Statistics Agency's population projections are higher by some 7,700 units than those reported in the 1991 Census of Population which under-counted both population and households.

2. CMHC's Potential Housing Demand Model - Methodology and Application

The Research Division of Canada Mortgage and Housing Corporation developed the Potential Housing Demand Model in 1989. It was first released to the public at the end of 1991. Numerous improvements to the original model have been made and refinements are ongoing. The model uses historical trend data from census results for New Brunswick for the period 1971 to 1991, projects these trends, applies these projections to projected population levels, and produces estimates, through to 2011, of the number and types of households which could be formed during this period.

The Potential Housing Demand Model is a menu-driven micro-computer model that produces long run projections of the potential demand for new housing. These projections are based on the projected growth in the number of households. The model's main components are :

- a population projection model
- a household projection model, and
- a housing demand projection model.

The model produces a number of reports and allows the user to test the sensitivity of projections to alternative assumptions. The use of the model allow for the projection of the number of households to be formed, the type of households formed and the type of dwelling those households are most likely to occupy.

At a minimum, the model requires the user to interject certain assumptions with regard to headship rates (household formation propensities), tenure choices, and dwelling type choices. Projections based on the most recent historical data can be generated easily using the software. This is, in fact, what will happen in the model if no "projections" or estimates are made of future behaviour trends in the various assumption areas just mentioned.

Population Projections

The Working Group agreed that the population projections developed by the Statistics Agency would be the population estimates used throughout the demographic exercise. Although the PHD model will project population by sex by age as the first stage in its calculation of housing demand, it allows the user to interrupt the exercise and interject alternative population estimates. Therefore, the model used the population projections developed by the Statistics Agency when projecting households by size and type.

Household Projections

In Stage Two, using Statistics Agency population projections, the model projected the number of New Brunswick households to the year 2011. It projected "family" and "non-family" households separately. Given no alternative scenarios, the model will project the number of family and non-family households by applying headship rates for the latest available year (1991) to the projected population levels used in the model. That is, it will assume that future populations will behave in exactly the same manner as the population in 1991 in respect of the rate at which people within each age group will form households and be the household head (maintainer). The Working Group considered various assumptions regarding trends in the formation of each type of household. In almost all cases, the projections to 2011 were based upon a continuation of the age group specific trends for the twenty year period from 1971 to 1991, not 1991 only.

Family and non-family households were projected for five-year age groups by multiplying projected age-group populations by projected age-specific family and non-family headship rates. A **headship rate** represents the probability that a member of a given age group will head (or maintain) a household of a given type (family or non-family). Historical headship rates are calculated as the ratio of household heads in an age group to the population of that age group:

(HR (a,h,y) = HH(a,h,y)/Pop(a,y) where:
HH = projected households
Pop = projected population
HR = projected headship rate
a = age group
h = household type (family or non-family)
y = year.

An increase in the total headship of any particular age group means that, overall, a higher proportion of that group heads households than previously. The converse holds for a decrease in the total headship rate. Thus, the total rates is an overall indication of the propensity of a particular group to form households.

Total HR (a,y) = Non-family HR (a,y) + Family HR (a,y).

Projection of Family Composition

The model provides for the disaggregation of projected family households into four family household types:

couples without children (C)
couples with children (CC)
lone parents (LP)
multiple-family (MF)

It should be noted that the model only projects households by family type proportions by **ten-year age groups** (age of head) from 15 - 24 years through to 75+. The model projects *households by family type* by multiplying the projected number of family households headed by a particular age group by projected family type proportions for that age group:

FHH(a,f,y) = FHH(a,y) * fp(a,f,y) where:
FHH = projected family households
fp = projected family type proportions
a = age group
f = family type, and
y = year.

Projection of Housing Demand

The housing demand projection stage is subdivided into two components:
tenure choice projections, and
dwelling choice projections.

Together, the two components will disaggregate projected households by tenure and dwelling type. The model projects the number of owners within a given age group and household type by applying projected ownership propensities to projected households by type and age of head, and then determines the number of renters residually.

OWN(a,h,f,y) = HH(a,h,f,y) * op(a,h,f,y)

RENT(a,h,f,y) = HH(a,h,f,y) - OWN(a,h,f,y), where:

- OWN = projected owner households
- RENT = projected renter households
- HH = projected households
- op = projected ownership propensity
- a = age group
- h = household type (family or non-family)
- f = family type
- y = year

Historical ownership propensities are *the ratio of the number of "owning" households of a given type and age of head to the total number of households (owners and renters combined) of that type and age of head*.

op(a,h,f,y) = OWN(a,h,f,y)/HH(a,h,f,y)

Once the model has determined the tenure splits, it can be used to calculate the dwelling type choice projections. However, for the purposes of this demography project, the models output was terminated at the end of the tenure projection stage. It was agreed that dwelling choice data would add little to the discussion on the potential impact of demographic change.